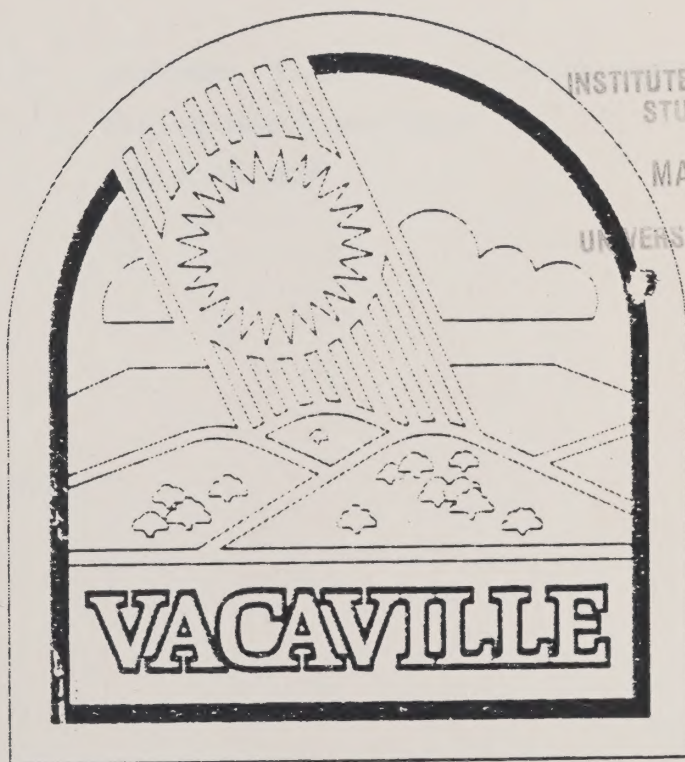


Proposed Vacaville General Plan

Volume Four: Addendum to Environmental Impact Report: Comments and Responses

SCH#89022819




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PROPOSED VACAVILLE

GENERAL PLAN

*Volume 4: Addendum: Response to Comments on Draft
Environmental Impact Report
SCH # 89022819*

August 1990

By

BLAYNEY-DYETT, URBAN AND REGIONAL PLANNERS

Brown & Caldwell, Consulting Engineers
Camp Dresser & McKee, Environmental Engineers
Charles M. Salter Associates, Acoustical Engineers
Notle & Associates, Engineers
TJKM, Transportation Consultants

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INTRODUCTION

This volume of the Proposed Vacaville General Plan includes all comments on the Draft Environmental Impact Report (EIR) received by the Community Development Department during the public review period ending June 20, 1990; minutes from public hearings on the Draft EIR before the Planning Commission and City Council; and the list of agencies/individuals who were sent the Draft EIR for review. Written responses to each comment are presented following individual comments. This document, together with the Draft EIR, constitutes the final EIR.

Comments were received from:

1. David C. Nunenkamp, Deputy Director, Permit Assistance, State Office of Planning and Research;
2. George Clavier, Graduate Student Assistant, Agricultural Resources Branch, State Department of Food and Agriculture.
3. Dennis J. O'Bryant, Environmental Program Coordinator, State Department of Conservation.
4. John-Scott Forester, Ernest Kimme and Ted Swiecki, Solano County Orderly Growth Committee.
5. John Wyro, Perma-Bilt Development.
6. John Jimerson, Assistant Planner, Department of Planning and Development, City of Fairfield.
7. William C. Robbins, III, Knox, Rickesen, Snook, Anthony, Harper and Robbins, Attorneys-at-Law.
8. Carl Heinz, President, Ulatis Resource Conservation District.
9. Keith Mattson, Environmental Review Officer, Metropolitan Transportation Commission.
10. Patricia Mickelson, Associate Transportation Planner, State Department of Transportation.
11. Glenn Miller, Real Estate Broker.
12. Naida West on behalf of Pacifico Gonzales.

13. Denis Murray, Facilities Planner, Fairfield-Suisun Unified School District.
14. Jim DeCoster, Conservation Chair, Redwood Chapter - Solano Group, Sierra Club.

SUMMARY OF COMMENTS

None of the comments received raised substantial new issues that were not addressed in the Draft EIR. The major areas of controversy remain those listed in Section 1.4. These include:

- o The location of new development outside the City limits and the 1980 planned urban area;
- o Preservation of farmland and whether the proposed urban service zone boundaries, buffer areas, and community separator concepts are adequate;
- o Acceptable levels of service and whether a TSM program that assumes a 30-percent reduction in peak-hour trips is reasonable;
- o Air quality and the effect of the plan on cumulative development within the air basin;
- o Biotic resources and whether Plan policies offer sufficient protection; and
- o Other environmental hazards and whether Plan policies and proposed improvements will provide adequate mitigation.

In the project description, the Draft EIR notes that the General Plan is intended to be a long-range, comprehensive and internally consistent policy document that will guide development and provide for environmental resources management over a 20-year period. The EIR on the Plan represents the first level or "tier" of environmental review, and its scope is geared to the scope of the Plan itself. In subsequent approvals of policy plans, zone changes and specific development projects, the City will have an opportunity to implement the mitigation programs contemplated by the General Plan building on additional information that will be gleaned from a second, more detailed "tier" of environmental analysis. Thus, mitigation anticipated by the General Plan EIR will be implemented in stages, and the annual report on the General Plan will provide a vehicle for mitigation reporting and monitoring, as required by CEQA Guidelines. A mitigation monitoring program is to be adopted by the City Council at the time that the Proposed General Plan is adopted.

To respond to specific questions raised by the California Department of Transportation, the Metropolitan Transportation Commission, the Solano County Orderly Growth Committee, the Sierra Club and others about the effectiveness of the TSM program requirements, TJKM revised the Citywide Transportation Study to include a specific analysis of future traffic volumes without TSM. This report is included in the Appendix with changes highlighted; the principal conclusions are as follows.

Without the TSM program, the number of roadway segments experiencing unacceptable congestion levels increases. These additional segments include:

- o Monte Vista Avenue between West Street and Vine Street
- o Allison Drive between Monte Vista Avenue and the office park streets
- o Vaca Valley Parkway between Allison Drive and Eubanks
- o Nut Tree Road between Orange Drive and Ulatis Drive
- o Nut Tree Road between Bel Air Drive and Farmington
- o Alamo between Tulare Drive and Nut Tree Road
- o Leisure Town Road between Maple Avenue and Ulatis Drive

These are in addition to the critical locations shown in Figure 4 in the Draft EIR. The additional congested links are shown in Figure 7A in TJKM's revised report in the Appendix. Although an intersection analysis for the roadway segments without the TSM condition was not performed, the link analysis could be indicative of intersections operating at unacceptable levels of service.

Freeway volumes are not as sensitive to TSM programs and are not projected to change significantly. This is because most freeway trips have one end outside the study area. There is little control of these external trips.

The Planning Commission responded to concerns raised about the need to protect biotic resources by recommending that a resources management component be required in policy plans and that the city continue to protect mature trees and existing non-agricultural trees.

The California Department of Food and Agriculture endorses the idea of establishing a farmland protection program and recommends approval of the EIR.

The California Department of Conservation's Division of Mines raised certain technical points related to landslide susceptibility and earthquake faults and suggested some additional information that might be included in the Safety Element.

In addition to TSM concerns, the City of Fairfield posed questions about coordination with the countywide congestion management plan, hillside development in Lower Lagoon Valley, the need for interjurisdictional cooperation and water conservation.

The Ulatis Resource Conservation District is pleased to see that the impact of new development on Alamo and Ulatis creeks has been recognized.

The Fairfield-Suisun Unified School District questioned the need for a boundary transfer, but its driving distance comparison relates only to existing schools.

The Solano County Orderly Growth Committee raised issues related to land use, open space, parks and recreation, transportation, conservation and the alternatives analysis. The Sierra Club expressed reservations about the conversion of prime agricultural land to urban use and the transportation analysis. Finally, individual landowners and their representatives and a real estate broker posed technical or site-specific questions related to the major areas of controversy previously noted.

COMMENTS AND RESPONSE TO COMMENTS

Comments received during the 45-day review period follow, along with the responses to these comments.

OFFICE OF PLANNING AND RESEARCH

1400 TENTH STREET
SACRAMENTO, CA 95814

June 21, 1990

Maureen Traut
City of Vacaville Planning Division
650 Merchant Street
Vacaville, CA 95688

RECEIVED

JUN 22 1990

CITY OF VACAVILLE
PLANNING DIVISIONSubject: City of Vacaville General Plan EIR
SCH# 89022819

Dear Ms. Traut:

The State Clearinghouse has submitted the above named draft Environmental Impact Report (EIR) to selected state agencies for review. The review period is now closed and the comments from the responding agency(ies) is(are) enclosed. On the enclosed Notice of Completion form you will note that the Clearinghouse has checked the agencies that have commented. Please review the Notice of Completion to ensure that your comment package is complete. If the comment package is not in order, please notify the State Clearinghouse immediately. Remember to refer to the project's eight-digit State Clearinghouse number so that we may respond promptly.

Please note that Section 21104 of the California Public Resources Code required that:

'a responsible agency or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency.'

Commenting agencies are also required by this section to support their comments with specific documentation. These comments are forwarded for your use in preparing your final EIR. Should you need more information or clarification, we recommend that you contact the commenting agency(ies).

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact Nancy Mitchell at (916) 443-0613 if you have any questions regarding the environmental review process.

Sincerely,

David C. Nutenkamp
Deputy Director, Permit Assistance

Enclosures

cc: Resources Agency

Project Title: City of Vacaville General Plan Environmental Impact Report

Lead Agency: City of Vacaville - Planning Division

Street Address: 650 Merchant Street

City: Vacaville

Zip: 95688

Contact Person: Laureen Travis or Bob Mordal

Phone: (707) 449-5140

County: Solano

Project Location

County: Solano

Cross Streets: I-80 at I-505

City/Nearest Community: Vacaville

Assessor's Parcel No. numerous

Section: numerous

Total Acres: 100 square miles approx.

Within 2 Miles: State Hwy # I-80/I-505/Hwy 113

Waterways: Alamo, Ukiah, Laguna, Eucalyptus, Jackson, etc.

Airports: Mt. Diab

Railways: SRR

Schools: numerous public & private schools

Document Type

CEQA:

☐ NOP☐ Early Cons☐ Neg Dec☒ Draft EIR☐ Supplement/Subsequent☐ EIR (Prior SCH No.)☐ Other

NEPA:

☐ NOI☐ EA☐ Draft EIS☐ FONSI

Other:

☐ Joint Document☐ Final Document☐ Other

Local Action Type

☒ General Plan Update☐ General Plan Amendment☐ General Plan Element☐ Community Plan☐ Specific Plan☐ Master Plan☐ Planned Unit Development☐ Site Plan☐ Rezone☐ Prezone☐ Use Permit☐ Land Division (Subdivision, Parcel Map, Tract Map, etc.)☐ Annexation☐ Redevelopment☐ Coastal Permit☐ Other

Development Type

NOTE: The figures below are based on additional development proposed beyond existing

☒ Residential: Units 21,000 Acres actual development.☐ Office: Sqft Acres Employees☐ Commercial: Sqft Acres Employees **☐ Industrial: Sqft Acres Employees **☒ Educational: New public schools to serve the new growth☒ Recreational: New parks to serve the new growth☐ Office acreage is included within Industrial.

**An additional 41,000 total new jobs are anticipated for the combined Commercial & Industrial activities.

☐ Water Facilities: Type

WGD

☐ Transportation: Type☐ Mining: Mineral☐ Power: Type

Watts

☐ Waste Treatment Type☐ Hazardous Waste Type☐ Other

Project Issues Discussed in Document

☒ Aesthetic/Visual☒ Agricultural Land☒ Air Quality☒ Archeological/Historical☒ Coastal Zone☒ Drainage/Absorption☒ Economic/Job☐ Fiscal☒ Flood Plain/Flooding☒ Forest Land/Fire Hazard☒ Geologic/Seismic☒ Minerals☒ Noise☒ Population/Housing Balance☒ Public Services/Facilities☒ Recreation/Parks☒ Schools/Universities☐ Septic Systems☒ Sewer Capacity☒ Soil Erosion/Compaction/Grading☒ Solid Waste☐ Toxic/Hazardous☒ Traffic/Circulation☒ Vegetation☒ Water Quality☒ Water Supply/Groundwater☒ Wetland/Riparian☒ Wildlife☒ Growth Inducing☒ Landuse☒ Cumulative Effects☐ Other

Present Land Use/Zoning/General Plan Use Approximately 20 square miles of the planning area are within the limits and developed or designated for urban use. The remaining area within the 100 square mile planning area is used for agricultural, rural residential or limited commercial use within the unincorporated Solano County.

Project Description The "project" is a comprehensive update of the General Plan. The proposed General Plan looks at development within the planning area for a 20 year period, to the year 2010. Future growth areas are identified which have the potential of adding approximately 46,000 residents to the present 63,000 household population.

CLEARINGHOUSE CONTACT: 916/443-0613

NANCY MITCHELL

OHT SNT

OHT SNT

STATE REVIEW BEGAN: 5-7-90

DEPT REV TO AGENCY: 6-14

AGENCY REV TO SCH: 6-19

SCH COMPLIANCE: 6-21

PLEASE RETURN NOC WITH ALL COMMENTS

AQMD/APCD: (Resources: 5/1/92)

Resources Agency

X Conservation

Fish & Game

Parks & Rec/OHP

DWR

S Caltrans 1/10

X Food & Ag

ARB

CA Waste Mgmt Bd

Reg. WQCB 1/5

NAHC

S Other: ARB

(*S* = sent by lead / ** = sent by SCH)

Response to State Office of Planning and Research

No response necessary.

Memorandum

To : Nancy Mitchell
State Clearinghouse
Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, California 95814

Date : June 19, 1990

Place : Sacramento

From : Department of Food and Agriculture --1220 N Street, P.O. Box 942871
Sacramento, CA 95814-0001

Subject: SCH No. 89022819 -- City of Vacaville General Plan

The California Department of Food and Agriculture (CDFA) has reviewed the Draft Environmental Impact Report (DEIR) which evaluates the potential impacts of adoption and implementation of the Proposed General Plan for the City of Vacaville.

CDFA strongly endorses the idea of establishing a farmland protection program. A coordinated approach based on the transfer and/or purchase of development rights, the establishment of conservation easements, and the use of right-to-farm ordinances will allow the City of Vacaville to accommodate the anticipated population growth while at the same time preserving vital agricultural land.

The CDFA recommends approval of the DEIR.

The CDFA supports the right of local agencies to develop and implement land-use policy in its area of influence, but also wants to assure that agricultural land is not prematurely and irreversibly lost due to development which is not accurately assessed for environmental impact.

Sincerely,



George Clavier
Graduate Student Assistant
Agricultural Resources Branch
(916) 322-5227

cc: Solano County Agricultural Commissioner
California Association of Resource Conservation Districts

Response to Department of Food and Agriculture

Comment noted; no response necessary.

Memorandum

To : Dr. Gordon F. Snow
Assistant Secretary for Resources

Date : June 19, 1990

Ms. Maureen Traut
City of Vacaville, Planning Division
650 Merchant Street
Vacaville, CA 95688

Subject: Draft Environmental
Impact Report for
City of Vacaville
General Plan Update,
SCH# 89022819

From : Department of Conservation—Office of the Director

The Department of Conservation's Division of Mines and Geology (DMG) has reviewed the Draft Environmental Impact Report (EIR) for the Vacaville General Plan Update, as well as the proposed General Plan Safety Element. We offer the following specific comments for consideration.

On page 99 of the Draft EIR, third paragraph, categories of landslide susceptibility are presented as "potential geologic hazards". The Draft EIR implies that several potential geologic hazards are being considered, when actually landsliding is the only significant geologic hazard discussed. Also on page 99, paragraph 5, there is a significant amount of text missing under the Marginally Susceptible Area category.

On page 101, paragraph 2, the discussion of the Existing Landslide Areas category should explain that all identified landslides are not included on Figure 9-1, and describe the reasons for selecting the landslides which are shown (size, activity, et cetera). The two DMG Open File Reports on which Figure 9-1 is based (Majmundar, 1989; Majmundar, 1987), should be referenced in the Final EIR and in the General Plan (only one is referenced, and only on Figure 9-1). For the sake of clarity, the discussion of landslide deposits relevant to land-use planning, which starts on page 104, should precede or immediately follow the landsliding discussion on pages 99-101. It would also be helpful to include figures 9-1 and 9-2 of the Proposed General Plan in the Final EIR, so that the EIR document can be reviewed without relying on information found only in the General Plan.

Table 4.7-A lists the earthquake faults that could impact the Vacaville Planning area. It may be appropriate to include the deep-seated boundary between the Coast Ranges tectonic block and the Sierra Nevada tectonic block as a seismogenic source that could impact the City of Vacaville. This boundary zone, though obscured at the surface, is considered by some researchers to be responsible for the 1892 Vacaville-Winters earthquakes (Wong and Ely, 1983; Wong, Ely and Kollman, 1988; Wentworth and Zoback, 1988). These earthquakes generated Modified Mercalli intensities of VIII (Toppozada, et al., 1981) in the Vacaville area, which is similar to the intensities caused by the recent magnitude 7.1 Loma Prieta earthquake of October 17, 1989.

Dr. Snow/Ms. Traut
June 19, 1990
Page Two

The recurrence intervals listed in Table 4.7-A should be verified. Wesnousky (1986) has estimated a repeat time of rupture on the San Francisco Peninsula segment of the San Andreas Fault to be on the order of 300 years. He estimates a repeat time of 150 years for the Calaveras Fault.


On page 105, last sentence of the second paragraph, a term appears to be missing in "...with severe or seismic hazard..." This should be clarified in the Final EIR.

The four proposed flood control reservoirs discussed in the Safety Element may fall under the jurisdiction of the State Division of Safety of Dams. The City of Vacaville may wish to contact that office while these facilities are being planned.

In addition to the above comments, there are two geologic/seismic hazards maps which the City of Vacaville may wish to prepare for the Safety Element. These include:

1. A potential seismic ground shaking intensity map which could be based on Association of Bay Area Governments (ABAG) and other existing historic data.
2. A map showing the potential for damaging expansive soils (high shrink-swell potential).

If you have any questions concerning these comments, or would like additional information, please contact Zoe McCrea, Division of Mines and Geology Environmental Review Officer, at (916) 322-2562.


Dennis J. O'Bryant
Environmental Program Coordinator

DJO:TM:efh

cc: Zoe McCrea, Division of Mines and Geology
Timothy McCrink, Division of Mines and Geology

References:

Majmundar, H. H., 1987, Landslide hazards in the south half of the Fairfield North quadrangle, Solano County, California: Landslide Hazard Identification Map 11, California Division of Mines and Geology Open File Report 87-9, 4 plates, scale 1:24,000.

Dr. Snow/Ms. Traut
June 19, 1990
Page Three

Majmundar, H. H., 1989, Landslide hazards in the Vacaville area, Solano County, California: Landslide Hazard Identification Map 14, California Division of Mines and Geology Open File Report 89-17, 4 plates, scale 1:24,000.

Toppozada, T. R., Real, C. R., and Parke, D. L., 1981, Preparation of isoseismal maps and summaries of reported effects for pre-1900 California earthquakes: California Division of Mines and Geology Open File Report 81-11 SAC.

Wentworth, C. M., and Zoback, M. D., 1989, The style of Late Cenozoic deformation at the eastern front of the California Coast Ranges: Tectonics, vol. 8, no. 2, pp. 237-246.

Wesnousky, S. G., 1986, Earthquakes, Quaternary faults, and seismic hazard in California: Journal of Geophysical Research, vol. 91, no. B12, pp. 12,587-12,631.

Wong, I. G., and Ely, R. W., 1983, Historical seismicity and tectonics of the Coast Ranges-Sierran Block boundary: implications to the 1983 Coalinga, California earthquakes: California Division of Mines and Geology Special Publication 66.

Wong, I. G., Ely, R. W., and Kollman, A. C., 1988, Contemporary seismicity and tectonics of the northern and central Coast Ranges-Sierran Block boundary zone, Journal of Geophysical Research, vol. 93, no. B7, pp. 7813-7833.

Response to Department of Conservation

- p. 99 The heading of this section calls out three types of effects: groundshaking, groundfailure, and liquefaction. We agree that the area classifications only refer to the second type of hazard; however, we think this is a semantic distinction that is not critical given the overall organization of the information presented in this section. The text shall be corrected as follows:

...colluvium that is considered unlikely to remobilize under natural conditions.

- p. 101 Valid comment. The text will be modified as follows:

Existing Landslide Areas. Areas identified on maps in California Division of Mines and Geology (CDMG) Open File reports as having had ... Not all landslides are shown; only those exceeding a certain size threshold as established by CDMG geologists.

Only the 1987 report is cited because that was all that was provided to us at the time this information was compiled, analyzed and mapped. Finally, the authors of this EIR believe that the logic of the presentation is understandable and, while the General Plan graphics may help, a decision was made not to republish them in the EIR in order to encourage use of this volume along with the General Plan. This is consistent with CEQA Guidelines which recognize that a General Plan may be its own EIR if appropriate references are provided; references to plan graphics are part of the cross-referencing that we believe CEQA envisioned.

- . Table 4-7A The additional information requested will be added on page 99, in the first paragraph as follows:

Groundshaking, Groundfailure, and Liquefaction ...
(See Table 4.7-A) CDMG geologists also note that the deep-seated boundary between the Coast Ranges tectonic block and the Sierra Nevada tectonic block is a seismogenic source that may impact Vacaville. This boundary zone, though obscured at the surface, is considered by some researchers to be responsible for the 1892 Vacaville-Witners earthquakes which generated an intensity similar to the Loma Prieta earthquake of October 17, 1989.

An additional note will be added to Table 4.7-A as follows:

The recurrence intervals stated above were re-examined by Wesnousky in 1986 in an article in the Journal of Geophysical Research (vol. 91, no. B12). He estimated a repeat time for the San Francisco Peninsula segment of the San Andreas Fault to be on the order of 300 years and a repeat time for the Calaveras Fault of 150 years.

p. 105

The missing term is "geologic."

The jurisdiction of the Division of Safety of Dams is noted as are the suggestions for additional hazard maps.

RECEIVED
JUN 20 1990
CITY OF VACAVILLE
PLANNING DIVISION

**A
RESPONSE
to Vacaville's
Proposed General Plan
and
Environmental Impact Report**

**The
Solano
County
Orderly
Growth
Committee**



Report Authors:
John-Scott Forester
Ernest Kimme
Ted Swiecki

June 20, 1990

INTRODUCTION

Vacaville is in a unique position in its central location between two large and expanding urban areas. The city is within commuting distance of both San Francisco and Sacramento, and our housing costs and the local amenities of semi-rural lifestyles make our community highly desirable for families. However, those same attractions -- the open spaces, the availability of single family housing, & the lack of congestion -- that bring people to Vacaville, will slowly be eroded by that same influx of people.

Recent growth in Vacaville has been accompanied by the steady annexation of lands to the city and the conversion of farms and ranches to urban development. If this outward expansion continues into the indefinite future, Vacaville will eventually be no different from southern California and the Bay Area. Vacaville will merely be an indistinguishable part of the "San Francisco - Sacramento Megalopolis." Productive farmlands around Vacaville will be destroyed directly through urbanization and indirectly through rising speculative prices for land which force farmers and ranchers out of business.

Vacaville's attempt to control and guide this growth has resulted in a proposed General Plan, which has taken shape through more than a year of meetings and tremendous work on the part of the city staff. While an admirable and credible step in the right direction, the proposed General Plan and the accompanying Environmental Impact Report are lacking in consistency and depth. While wishing to acknowledge the amount of foresight and work that went into these documents, the Orderly Growth Committee believes that an issue as important as Vacaville's future and our quality of life deserves intense scrutiny.

This document takes its organization from the proposed General Plan. Each element first examines the proposed General Plan for consistency with other parts of the General Plan. The second section of each element ("EIR Comments") is developed in more detail, as it is the EIR that is the factual foundation upon which the General Plan is developed. It is this section that discusses the accuracy of the EIR and inspects the relationship between the EIR and the proposed General Plan. Some elements conclude with general questions addressed to the policy makers & citizens of Vacaville.

The page numbers in the left margins refer to both the General Plan ("GP") and the Environmental Impact Report ("EIR"). Where possible, any references to the General Plan are linked to General Plan policies.

It should be noted that several places in the General Plan acknowledge that there is not sufficient information, and state that future studies will examine these areas in depth. For example, a large part of the Traffic planning is based on a TSM (Transportation System Management) that has yet to be developed. Development in the Lagoon Valley is predicated upon a Project EIR that has yet to be completed. Upstream dams in the Vaca Mountains will help with flood control through the West Valleys and the City, yet the hydrological studies necessary have not even been started. This is a piecemeal approach to planning, and is generally frowned upon by CEQA.

LAND USE

General Plan Consistency

GP

2.1-G1

"Maintain Vacaville as a free-standing community surrounded by foothills, farmland, and other open space. "

GP

3.5-G5

"Maintain a compact urban form and locate growth areas to minimize loss of agricultural resources."

These policy statements contradict the statement in the General Plan text that development of the West Valley Planning Sector will be done in a sensitive fashion (pg. 2-3). Development in the West Valley Sectors will do nothing to maintain a compact urban form, preserve open space between cities, or ensure that Vacaville remains a free standing community. The EIR should analyze the effects on the Vacaville community from the loss of the compact urban form, loss of open space, and the merging of Vacaville and the surrounding cities.

GP

pg. 11-3

Vacaville -Land Use/Zoning Consistency, Table 11-1, should indicate possible incompatible adjacent land uses.

EIR Comments

GP

2.3-I8

"development shall enhance recreation"

4.6-I7

"promote the environmental and recreational qualities of Lagoon Valley"

The EIR (pg. 59) notes that development in Lagoon Valley will mean the "loss of parkland, disturbance of park's scenic and recreational qualities, a degradation of ambient environmental qualities due to increased noise and air pollution, etc..." This is in direct conflict with the stated General Plan policies. The EIR should state the mitigation that would be required to promote and enhance the environmental and recreational qualities of Lagoon Valley.

EIR
pg. 16

There is a repeated reliance on ABAG projections without the use of any other corroborating data. Specific examples include but are not limited to the following tables: Table 2.3-B & Table 2.3-C; Comparison of Population and Employment Projections ; Table 2.3-D; Ratio of Jobs to Employed Residents. Since many other aspects of the General Plan are based on these ABAG projections, there should be a comparison of those predictions with Vacaville's actual population and employment base.

EIR
pg. 42-43.

Adequate alternatives for mitigating negative impacts on visual quality and community image and form have not been adequately addressed in the EIR. Development of the West Valley sectors will effectively destroy the last significant visual separator between Fairfield and Vacaville along the I-80 corridor. Under the proposed development, there will be no more separation between Fairfield and Vacaville's proposed development in the West Valley sector than between the West Valley sectors and the remainder of the city. Alternatives that should be considered include siting development in the planning areas contiguous with the remainder of the city, or restricting development to only very low density and low profile development.

EIR
pg. 61.

Although significant negative impacts on the Lagoon Valley Regional Park have been identified, admittedly inadequate mitigation options have been considered. Under the intent of CEQA, other alternatives that reduce negative impacts must be considered. These should include siting office, commercial, and residential uses in other portions of the city's planning area, reducing the total area of the valley that would be allowed to develop, and reserving the valley for land uses (such as the existing equestrian center and glider port) that enhance rather than degrade the recreational and aesthetic value of the area.

EIR
pg. 85

The EIR should analyze the nearly total loss of prime agricultural soils in the West Valley sectors under the proposed development. In addition to prime soils, this area also has a unique micro-climate that has not been adequately considered in comparisons with agricultural areas to the east of Leisure Town Road. The EIR should also contain a compensation element to mitigate the loss of these soils.

OPEN SPACE

General Plan Consistency

GP

3.5-I1

Vacaville will "maintain agricultural production areas in Upper Vaca Valley, north of Alamo Creek, Bassford Canyon (also known as Cherry Glen), and east of Leisure Town Road." This policy is in conflict with Policies 2.3-I8 and 2.3-I9 (pages 2- 14,15) which outline the development which is to take place in those valleys.

GP

3.5-G5

Vacaville will "maintain a compact urban form..." This is in conflict with Policies 2.5-G1 and 2.5-G2, which promote low density housing and urban sprawl, by specifying that single family homes shall be the majority of the new housing.

EIR Consistency

EIR

pg. 112

In spite of the presence of significant wildlife habitat and several species of significant concern within the West Valley sectors, no original biological survey has been conducted to document the presence and extent of critical species and habitat. In effect, the EIR attempts to minimize the potentially significant negative environmental impacts posed in the General Plan land uses for this area through ignorance of the natural resources present in these planning sectors. By suggesting that mitigation for critical habitat and species be conducted on a project by project basis (EIR pages 119, 130), the EIR seeks to circumvent the intent of CEQA that requires that the cumulative impacts of the entire plan be considered. The EIR should contain species-specific maps of habitats, and discuss the environmental impacts of habitat loss or movement.

EIR

pg. 120

It is stated in the EIR that "there are no currently listed Federal or State endangered, threatened or rare species within the Vacaville Planning Area." However, Dr. Richard A. Arnold, Entomological Consulting Services, has documented the presence of the Valley Elderberry Longhorn Beetle within the Vacaville Planning Area, in the vicinity of Ulatis Creek. This beetle is listed by the US Fish and Wildlife Service as a threatened species. As such, any modification of the habitat that may affect this species must be considered as a significant impact.

While acknowledging its presence within the Vacaville Planning Area, the EIR does not note the special significance of Valley Oak (*Quercus lobata*) stands within the West Valley sectors. Valley Oak is listed in List 4 of the 4th edition (September 1988) of the Inventory of Rare and Endangered Vascular Plants of California published by the California Native Plant Society. This document notes that Valley Oak is threatened in the Central Valley and may be locally significant. The range of this species has been reduced more than any other California oak species, and it has been the focus of concern by the California Department of Forestry and Fire Protection. Neither the EIR nor the General Plan acknowledges the presence of Valley Oak outside of the riparian corridor although it occurs on hill slopes and on the valley floor. A particularly unique remnant of valley floor oak savannah is present in an area designated for highway commercial development in the General Plan. The EIR should contain an original biological survey to address the extent of endangered and threatened species within the Planning Area.

Proposed alterations in the hydrology of the west valley sectors, due to water retention, changes in drainage patterns, and changes in stream flows will have significant negative impacts on Valley Oak and elderberry, as well as other perennial vegetation in the area. The EIR should propose mitigation for these negative impacts.

EIR

pg. 115

The description of the oak woodland habitat as described is so overly generalized as to be inaccurate, particularly in the description of vegetative cover types. The description fails to note that oak woodlands are known to constitute the richest terrestrial wildlife habitat in the state. Furthermore, the contribution of open fields to the habitat quality of the region has not been fully recognized in the EIR. Many of the species that may utilize the riparian corridors that are nominally slated for preservation are also dependent on open fields for foraging. Preservation of narrow riparian corridors alone will severely reduce the habitat value of these areas.

The proposal to mitigate destruction and alteration of habitat through replacement and restoration will not be adequate to maintain habitat values near their original values. The presence of large over-mature valley oaks along existing roadsides, riparian corridors, and valley floor areas cannot be mitigated through replacement with young trees, which lack the sheer size and cavities required by various cavity-nesting species. Since this age class of trees has a limited life expectancy, appropriate mitigation requires preservation of trees in younger age classes as well. Furthermore, habitat value is also dependent on the location of trees, so

that trees preserved in and around residential developments are not expected to have habitat value approaching that already existing in the area.

The EIR should address the potential use of alternative sites to minimize or prevent significant impacts to the West Valley sectors. Shifting the proposed development to the planning areas already within Vacaville's urban boundary, would clearly result in reduced impacts to sensitive and endangered species and habitats.

EIR
pg. 148

Public statements have been made by the Vacaville Planning Department staff, Council members, and Commissioners that the proposed General Plan has more Open Space than the existing General Plan. This statement has been used several times as the justification in voting FOR the proposed General Plan. Yet the EIR (pg. 148 - footnote) states that "the existing General Plan does not include the [33,040 acres] of open space and agricultural lands in the Planning Sectors of the Vaca Mountain Foothills and East of Elmira sectors. Without these sectors, the existing Plan preserves more open space than the proposed Plan."

PARKS & RECREATION

General Plan Consistency

GP
4.6-I7

Vacaville will "promote the environmental and recreational aspects of Lagoon Valley Park." Yet, no mention of the Park is made in Policies 2.3-11 through 113, the very policies that will be guiding the development of the valley. At the very least the General Plan should have a policy of seeking avenues of collaborative planning with Solano County Park Management to promote and enhance the recreational aspects of Lagoon Valley Park.

EIR Consistency

EIR
pg. 58

The proposed policy has inadequate provisions for funding new and existing parks. Currently, Vacaville attempts to get new parks dedicated by development, and funded by Park Maintenance Districts. Yet as mentioned in the EIR, these funding districts are not sufficient for "maintaining and developing all the existing neighborhood parks. In 1990, 11 neighborhood and community park sites remain undeveloped."

The creation and funding of Bicycle Paths, Lanes, Routes is also unclear. As many of the proposed Bicycle Paths, Lanes and Routes are on existing streets, provision will need to be made for the expense of widening existing streets.

It should be noted that bicycles are included in Transportation Element, even though bicycles are overwhelming used for recreation, not transportation.

EIR
pg. 59-61

The EIR is very clear that development in Lagoon Valley will have significant adverse effects on Lagoon Valley Park. Some of the impacts mentioned are the "disturbance of the park's scenic and visual recreational qualities, a degradation of ambient environmental qualities due to increased air and noise pollution, and a possible decrease in fishing and swimming opportunities." Furthermore, the EIR states that the park will LOSE land as a result of developing the valley. The EIR also acknowledges that "only partial mitigation" is possible for these effects of development. The EIR should analyze several mitigation scenarios to reduce the negative impact.

EIR
pg. 55

The EIR is inaccurate in its description of the uses of Lagoon Valley Park. The uses as described in the EIR are swimming & group picnicking (high

priority), fishing access (medium priority), and boating & general picnicking (lower priority). The Lagoon was at least partially constructed with Fish & Game funds, and therefore FISHING, by grant mandate, is a high priority use, and must continue to be a high priority use. . . . Swimming, listed as a high priority usage, is at the very least discouraged due to liability problems. Boating, in particular sailboarding, has grown in importance in the last several years. Lagoon Valley is a major sailing location for beginning and intermediate sailors; it is not uncommon for sailors to drive an hour or more, every weekend, to sail at Lagoon Valley. The Rangers at Lagoon Valley Park should be contacted for more accurate usage information.

General Comments

The General Plan Diagram shows that a "Single Usage Business" is to be sited between Lagoon Valley Park and the proposed golf course & residential development. It is not appropriate to place a commercial usage between two recreational usages without any type of transitional usage or buffer zones. This would be contrary to generally accepted land use guidelines.

The proposed "view corridor" of Lagoon Valley, as described in previous comments and policy formulations, is only 400 feet wide (GP 2.3-I8, and EIR pg. 61) This is approximately a 90% reduction in the view corridor - from about 4,000 (top of the hill on the freeway, through the valley) to about 400 ft.

TRANSPORTATION

General Plan Consistency

GP

6.1-G1

Vacaville will continue to use a traffic LOS (Level of Service) "C" or better as the standard at all intersections. This LOS is defined in the EIR (page A-5) as having stable flows of traffic, with acceptable delays, and the possibility of small back-ups; in general, although the streets may be full of cars, there will be an easy ability to drive. With these traffic standards, there is no reason for drivers to use alternative transportation.

GP

6.4 - I1

Vacaville will develop a TSM (Transportation Systems Management plan) which will reduce traffic by 30%; the General Plan acknowledges that the success of successful land use planning is dependent on a successful TSM. However, 2.1-G8 states that the majority of new development shall be low density, single family housing. The average maximum number of residential units per acre would be 5.5 units per acre (Table 2.2, pg 2-19). The FAR (Floor Area Ratio) shall be generally limited to ".3"; the Industrial Park FAR shall be limited to ".4" (pg. 2-21) . These types of low density development are not conducive to the achievement of a 30% reduction in vehicle trips. In order to be successful, Transportation Systems Management plans generally require higher density development, restricted parking policies, higher costs to use personal automobiles, and access to mass transit (including van pools).

EIR Consistency

EIR

pg. 26

The traffic studies in the EIR are based on a 30% reduction in vehicle trips from employment centers based on TSM measures. If this 30% reduction is not achieved, then the majority of the projections in the General Plan and the EIR are invalid. The EIR should address this issue, and investigate other ways to mitigate the increased levels of traffic that development will bring.

EIR

pg. 139

Air Quality standards, as per the Urban Emission 2 model, assumes a gradual improvement in auto emissions as older vehicles are retired, and the "fleet" becomes cleaner. Any degradation of LOS or attainment of less than 30% reduction of vehicle trips through the TSM would result in an increase of auto emissions, as slower cars and those cars waiting at

intersections produce more emissions. Also this statement presupposes advances in technology that will continue to reduce auto emissions. Making projections based on future technology is contrary to CEQA guidelines. (see comments under "Air Quality")

CONSERVATION

General Plan Consistency

GP

8.1-I6

This policy would "consider" the establishment of maintenance districts to ensure that Vacaville's creeks will be kept free of debris and other impediments to run-off flows. However, the General Plan (page 9-6) acknowledges that these creeks already experience flooding problems, and that new development will only bring more water and flooding to Vacaville. This policy should require a Maintenance District and a credentialed professional to oversee the hydrological, biological, and maintenance requirements of Vacaville's creeks and watersheds.

EIR Consistency

EIR

pg. 37

AIR QUALITY

The proposed plan (Sketch Plan A) shows increases in the following Air Quality measures: Vehicle miles - 350%; Total organic gases - 280%; Carbon monoxide and nitrogen oxides - 375%. Furthermore, Air Quality standards are expected to worsen under all alternatives except for maintenance of existing conditions (pg. 139 & 140). The only mitigation proposed is the implementation of a TSM calling for a 30% reduction in vehicle trips. The worsening of air quality is known to effect human health, livestock, and vegetation. Significant worsening of Air Quality is not acceptable and will not achieve compliance with the attainment of mandatory air quality standards. The EIR should analyze other alternatives to mitigate this deterioration in Air Quality.

EIR

pg. 38

The model used to develop the Air Quality predictions assumes a progressively cleaner "fleet." This is based on the retirement of older vehicles with higher emissions, and continued advances in automobile emission technology. Future improvements in automobile emissions and/or a change in air quality standards cannot be projected under CEQA in order to achieve legal levels of attainment for air quality.

EIR

pg. 39

Air Quality mitigation plans are not compatible with construction of low density housing units away from more urbanized areas such as those proposed for the Western Sectors. (see comments under "Traffic")

EIR
pg. 111

HYDROLOGY: DRAINAGE AND WATER QUALITY

The EIR states that FEMA is updating maps showing 100 year flood plain "These maps will show different 100-year flood areas". Currently there is insufficient information to evaluate what the geographical extent of the anticipated new 100-year flood plain will be and the costs and/or land use changes associated with providing legally required protection for new construction. It is conceivable that 100-year protection . . .

(1) will be too costly (monetarily) to achieve for the proposed density of development in downstream areas and that increases in density will be required to support flood control measures

(2) will be too costly (environmentally) through the loss of riparian habitat, reduced stream flows to the Sacramento River/Delta, and inundation of agricultural lands.

(3) cannot reasonably be achieved given current engineering technology once the new floodplains are delineated.

The EIR should examine these issues, and provide mitigation for the assumed current understatement of the 100 year flood plain.

EIR
pg. 110:

The EIR states that "all upstream reservoirs are needed to fully mitigate existing problems and future impacts from development". If the adoption of the proposed General Plan is contingent upon a future condition (such as construction of upstream reservoirs for mitigation of peak flows within the Ulati Creek watershed), then the following issues should be addressed in the final EIR:

- impacts from reservoir construction and water detention
- inundation of agricultural lands
- inundation of riparian habitat/oak savannah
- destruction of archeological sites
- reduced flows into the Sacramento River/Delta which may
 - exacerbate ongoing impacts to anadromous fish water rights
- costs of road, utility and residential relocations

Some of these issues may be partially addressed in the Ulati Creek Watershed Study , and if so should also appear in the EIR. If they are not in the Ulati Creek Watershed Study , they should also be addressed in the EIR since the magnitude of these impacts is unknown. (Several attempts have been made to get a copy of Ulati Creek Watershed Study; however, only one copy has been located, and it has not been made available to the public.)

EIR
pg. 117

The EIR seriously under-represents the potential impacts of development on water quality in both the creeks and Lagoon Valley Lake that would be expected under the proposed development. A high input of both fertilizer salts, including nitrates and phosphates, and pesticides, including herbicides, fungicides, and insecticides, would be expected to occur in surface and subsurface flows associated with golf course developments. These materials may adversely affect both aquatic species, including fish in Lagoon Valley Lake, and terrestrial species, including birds and mammals. In addition, the likely presence of the valley elderberry longhorn beetle in this area would require restrictions on the pesticides that could be used. Even if more intensive agricultural operations were undertaken in the valleys than are currently practiced, the inputs of fertilizers and pesticides into surface and subsurface waters will be less than that produced by golf courses and landscaped developments. The EIR should analyze these potential impacts on water quality in the Project Area.

EIR
pg. 106

WET LANDS

The EIR does not address the issue of wetlands, yet the National Wetlands Inventory Maps (US Department of the Interior, 1987) show the existence of wetlands in the Planning Area. Local Fish & Game officials have been monitoring a wetlands area adjacent to the I-80 eastbound on-ramp at the Cherry Glen over-crossing; there may be may other wetlands that are less easily found. Under the U.S. Army Corp of Engineers Clean Water Act, Section 404, developers must acquire a permit to fill wetlands. Also, under section 1601.03 of the State of California, Department of Fish and Game Code, a Stream-bed Alternatives Agreement must be obtained. The EIR should survey the Planning Area for wetland sites, analyze the effects of development on those sites, and also address the National Policy that there shall be no net loss of Wetlands Habitat.

General Comments

How can it be stated that upstream reservoirs will provide the necessary level of mitigation required until FEMA maps are completed in 1992? There is insufficient information available to make this type of assumption. There is also insufficient information to develop land use plans affecting commercial or residential construction until the flood-plains are defined.

Once new floodplains have been delineated, perhaps portions of the Western Section, i.e. Lagoon Valley and Cherry Glenn Valleys, should be reserved for diversion of overflows rather than used as commercial and residential development. Temporary inundation from flooding is less likely to impact certain agricultural practices than what is recommended in the draft General Plan.

Does the City of Vacaville and its developer partners have the expertise to implement an extensive system of flood control? Or will flood control measures be achieved with the assistance of a federal entity such as the Soil Conservation Service or the Army Corps of Engineers (i.e. the Corps is currently constructing flood control channels for the City of Fairfield.) If flood control is to be achieved under federal auspices, is the City of Vacaville prepared to cost-share in mitigation measures required under the National Environmental Policy Act (NEPA) and Fish & Wildlife Service coordination for any projects that are federally funded, permitted or licensed?

ALTERNATIVES

EIR
pg. 133

The EIR, in its discussion of alternatives, is limited to a narrow range of possible growth scenarios for Vacaville. It fails to consider other approaches that would preserve the character and form of Vacaville. Among the four alternatives examined in the EIR, all assume a continuation of low-density sprawl outward from the existing urban boundaries. This response will result in increased pressure on adjacent farm land and open space and more widespread traffic congestion, as has been experienced elsewhere in the Bay Area.

Additional analysis of alternatives should be undertaken in the Final EIR to address a broader range of urban growth scenarios for Vacaville. A set of development alternatives should be developed that respond to a given level of population (about 110,000 persons) and employment (about 75,000 jobs). The alternatives analysis would then consider various land use policies and plans that would provide for these selected growth objectives. This approach to the sketch planning process, in order to be meaningful to citizens and decision makers, should be directed at the following topics:

a) How can the expected increases in population and employment be accommodated within the existing urban boundaries? This analysis would define the changes in density necessary to support growth, but without encroaching into areas that are currently not zoned for development.

b) What is the potential for directing employment to high-density concentrations within selected areas of the city? This analysis would identify opportunities to revitalize the city center as an employment center. With high employment density, alternative modes such as transit, car pooling, walking and bicycling become feasible.

(This approach has been demonstrated to be effective in Bellevue, Washington, a suburban Seattle community of about 85,000 population and 40,000 employment. About 23,000 persons are employed in a 200 acre city-center, with the result that transit usage ranges as high as 20%. By contrast, transit usage in central Vacaville is estimated to be below 5%, and would continue at these low levels in Alternative Sketch Plans A, B, C, and the Proposed Plan.)

Other benefits of high employment density are a pedestrian-oriented city center, reduction of area devoted to parking, and decreased air pollutant emissions. Because the sketch plan alternatives are so narrowly focused, these important issues are not addressed in the EIR.

c) What are the implications of continued residential development at extreme low densities (under 3 dwelling units per acre)? While the Proposed Plan provides for such densities at the edges of the city, experience has shown that these properties ultimately will be overtaken by future expansion of the city limits. Residential land uses at low densities are difficult to serve with transit, and the single-use, enclave nature of their layout makes walking to neighborhood stores difficult. Sound walls and cul-de-sac streets also make walk and transit trips circuitous, and concentrate vehicle trips on few streets. Consequently, these streets must be wider, and are more intimidating to pedestrians and cyclists.

Alternative approaches could include higher residential densities, interspersed with neighborhood shops within walking distance, and narrow streets with curb parking for pedestrian friendliness. While some of these alternatives may be initially undesirable to Vacaville citizens, these alternatives should be included in the EIR in order to provide an impartial analysis of all the alternatives. In summary, the formulation and discussion of sketch plan alternatives within the EIR must be considered inadequate to guide Vacaville's growth over the next 20 years. A more comprehensive approach is needed that embraces a wider view of Vacaville's future.

SOLANO COUNTY ORDERLY GROWTH COMMITTEE

Since 1983 the Orderly Growth Committee has played a dynamic role in managing Solano County's growth. Now, as then, the OGC believes in well planned, moderate growth within urban limits. The preservation of agricultural lands and establishment of permanent open space between existing communities is essential if Solano County is to maintain its unique blend of urban and rural life styles.

In 1984, the Orderly Growth Committee authored a countywide initiative, entitled Proposition A, and which subsequently was approved by the voters. Prop A directs new development into the cities and supports the existing General Plan for the county which protects agricultural land from rezoning.

Since the establishment of Prop A, Orderly Growth has been active and successful in its efforts to curb leapfrog development and reduce conversion of prime farm land to residential and industrial uses. OGC was instrumental in the formation of the Solano County Farmlands Open Space Foundation. This nonprofit, private foundation is dedicated to preserving Solano County's important agricultural areas and open space between communities. Several thousand acres have been purchased by the foundation and will be permanently protected from future development.

However, the explosive growth that is facing Solano County and the entire I-80 corridor will not subside. The steadily worsening problems -- traffic, air pollution, loss of open space have convinced a large segment of the community that this area is at a crossroads. Solano County's unique and valuable assets -- the foundation for the high quality of life we all enjoy -- are threatened not by economic growth or urban development per se, but by poorly planned and uncoordinated growth and piecemeal decision-making. Effective advocacy is need to bring to local decision-making a higher level of awareness of these regional assets and a willingness to shape and coordinate plans for growth.

The Orderly Growth Committee needs your support in carrying out these goals. Please join us in this effort by contacting John Forester at (707) 447-1555.

Response to Solano County Orderly Growth Committee

The Solano County Orderly Growth Committee submitted comments on both the General Plan and the EIR. Plan comments will be considered by the City Council independently of the EIR; this document only responds to comments on the EIR. The organization of these responses follows the presentation of comments.

Land Use

- p. 59 On pages 60 and 61 mitigation is addressed; further, the EIR notes that this impact on the regional park may only be partially mitigated, so a finding of overriding considerations is appropriate. However, it is premature to judge the outcome of the policy planning effort in the General Plan EIR in that the requested mitigation (implementation policies) cited by the Committee would dictate objectives for planning for Lower Lagoon Valley, prior to completion of the policy plan.
- p. 16 CEQA Guidelines clearly permit use of projections prepared by an areawide planning agency to establish a reference point for analysis of cumulative impacts. Because ABAG has been developing a regional database in consultation with Bay Area cities since the mid-1970s, there is substantive corroborating data available, but we do not believe that detailed analysis of this information is warranted in this EIR. Factual comparisons with existing population are presented in Table 1.0-B. Although no actual surveys of employment in the City have been conducted, the existing land use surveys can be used to approximate employment potential by using average employment densities per acre. The Appendix contains a detailed listing of commercial and industrial acreage (pg. 9 of TJKM report). As part of the planning work, we correlated this information with ABAG's projections and found a reasonably good fit. We present ABAG estimates for the 1990 planning year so we are using the same data set to determine long-term needs.
- pp. 42-43 The comment pre-supposes a conclusion that West Valleys development "will effectively destroy that last significant visual separator..." The EIR does not ignore this effect; rather it notes that this development "will reduce Vacaville's visual distinction from Fairfield." The alternatives mentioned in the comment were evaluated as part of the sketch planning effort, and fully considered by the General Plan Committee during the course of public deliberations on the General Plan involving nearly 40 separate meetings. The Alternatives Section of the EIR notes that these alternatives were

considered. Further, the Plan EIR mitigation includes a proposal for more visual analysis in policy plans. The Plan EIR also acknowledges the City's commitment to a one-mile community separator between Vacaville and Fairfield. As illustrated on the Plan Diagram, the proposed separator would not be an inconsequential visual element in the regional landscape. Finally, the Plan EIR concludes that Plan policies will "partially mitigate visual impact through policy plans" (p. 5) but this impact remains significant. The Summary of the EIR also reminds readers that the City has the right to allow significant environmental effects to occur as long as final action on the project includes a statement of the specific reasons supporting the action, which is commonly known as a "statement of overriding considerations." With this in mind, we agree that an environmentally preferred alternative from the standpoint of the natural visual environment would not include West Valleys development, but it also should be noted that the Plan includes specific measures that are intended to enhance community image and the character of the built visual environment. On balance, we submit that this issue of visual quality and community image and form is adequately addressed. (Also see response below to comment regarding p.61.)

p. 61

The alternatives noted were considered during the sketch planning process, which the EIR clearly describes in Chapter 5 and summarizes in Chapter 1 in the section entitled "Issues to be Resolved and Major Areas of Controversy." The choices are clear and the EIR does not obscure them. The following text is hereby incorporated into the EIR at the bottom of page 133:

The General Plan update process conducted by the City of Vacaville included consideration of several alternative land use configurations which were titled "Sketch Plans A, B, and C." The three sketch plans were developed by the City's consultant, Blayney-Dyett, in response to public input received during the initial stage of the update process. The sketch plans were intended to depict alternative general directions and rates of growth for the City as well as alternative land uses for individual properties. The sketch plans were not intended to be absolute "all or nothing" options. It was clearly indicated that the final adopted General Plan could be similar to one of the sketch plans or it could include elements taken from each plan.

The General Plan Committee sponsored a 2-hour cable television program to inform the public about the sketch plans which was rebroadcast numerous times. Presentations were also made to numerous community organizations and interest groups. The Committee additionally held a total of 18 public meetings to gather public input about the sketch plans and options for the new General Plan. All interested persons were heard as part of those meetings.

The General Plan Committee reviewed each sector of the City and received a staff report and public input on each parcel or area where there were alternative land uses proposed. Based on the input received the Committee made initial land use determinations for each sector and parcel through the use of "straw votes." In this manner the Committee constructed a land use plan that reflected the majority opinion of the group.

The General Plan Committee did not choose to recommend any of the three sketch plans as proposed and instead developed a balanced land use diagram that contained elements of each sketch plan. The Committee indicated concerns with Sketch Plan "A" for a number of reasons that included development of the Vaca Valley area north of Alamo Creek and limited development east of Leisure Town Road. Sketch Plan "B" concerns included limited residential development and industrial parks in Lagoon Valley and extensive growth east of Leisure Town Road. Concerns with Sketch Plan "C" included a residential expansion inadequate to meet the City's "fair share" of regional housing needs and reliance on a higher density residential development pattern.

The combination of land uses that received straw vote acceptance by the General Plan Review Committee were combined into a single land use diagram as part of the Proposed General Plan. The Committee made it clear that the proposed plan did not represent a final decision on land use. The Proposed Plan was intended to be an expression of the preliminary consensus of the group that would be subjected to detailed analysis through an Environmental Impact Report and lengthy public scrutiny.

p. 85 The EIR Does analyze the loss of prime agricultural soils and presents detailed maps which can be used in connection with Plan maps to understand these impacts. However, site-specific analysis of micro-climate is beyond the scope of a General Plan EIR. Specific compensation for loss of these soils is not proposed, nor is it required if other Plan policies are intended to mitigate this impact. In fact, the EIR notes the City's intent to prevent long-term loss of agricultural land by entering into an Agreement with the Solano Irrigation District to establish agricultural service areas and urban service areas. A statement of overriding considerations will need to address the reasons for allowing the conversion of certain prime agricultural lands to urban development.

Open Space

p. 112 Original biological surveys and species-specific mapping normally are outside the scope of a General Plan EIR. Use of secondary data is recognized as valid by CEQA Guidelines which permit tiering of environmental review and state that the scope of environmental analysis should be geared to the level of detail required for decision-making. Since a General Plan is by its very nature general, reliance on secondary data, aerial photographs, maps and reconnaissance-level field work is appropriate. Further, the Conservation Element of the Plan includes specific policies that are intended to protect habitats. With this in mind, there is no intent to circumvent the intent of CEQA nor obscure cumulative impacts. In fact, on pages 116-118, impacts with Plan buildout are fully discussed and the cumulative effects of development are described.

p. 120 The quoted statement refers to information provided by a computer search of records in the California Natural Diversity Data Base; ESA's research on Ulatris Creek is clearly acknowledged on page 121. Because the Plan proposes protection of riparian habitat, modification of the habitat of the Valley Elderberry Longhorn Beetle is unlikely to occur, so no significant impact is anticipated as a consequence of adoption of the General Plan.

While specific analysis of Valley Oaks was not conducted, the Conservation Element does include policies intended to protect woodland habitat and the suggested mitigation on page 119 includes provision of neighborhood habitat preserves and replacement of native vegetation where feasible. Environmental resources also are to be monitored as a condition of policy plan approval where new development would have an adverse impact on wildlife resources or

sensitive habitat. These mitigation measures are intended to embrace potential impacts on the Valley Oak and elderberry as well as other specific and special status species.

- p. 115 The comment raises valid points. The proposed mitigation is not intended to maintain habitat values "near original values." However, restoration of riparian habitat on the basis of a 3:1 ratio will increase specific types of habitats which will be beneficial for certain species.

The policy plans offer an appropriate vehicle for the suggested mitigation (preservation of trees in younger age classes) particularly in light of the amended policy recommended by the Planning Commission which calls for a resource management component in new policy plans.

The issue of alternative sites is addressed in Chapter 5 of the EIR. (Also see previous response to the land use comments regarding p.61 and alternatives.)

- p.148 The comment makes a valid point which is acknowledged in the footnote. What the Plan EIR is emphasizing is the fact that the City is planning for a significantly larger area and, within this area, the Plan proposes preservation of a substantial amount of open space. As there have been developer proposals for large sites outside the proposed urban service area, the Plan policies are important and will be used by the City to keep this land as open space.

Parks and Recreation

- p. 58 The comments about funding do not raise environmental issues. However, the last sentence in paragraph one on page 58 is reworded as follows:

However, in 1990, all existing park sites in developed or newly developed areas are under construction, funded as capital improvement projects, or are to be constructed through development agreements or conditions of approval on projects.

The Transportation Element is intended to accommodate all types of travel, not just work trips, so recreational bicycle use is appropriately addressed in this element.

p. 59-61	As noted in earlier responses, we believe that analysis of several mitigation scenarios for a specific project (i.e. West Valleys development) is outside the scope of a General Plan EIR.
P. 55	<p>The description of users was derived from County documents; the clarification of Fish and Game priorities is acknowledged. However, as detailed planning for Lagoon Valley is outside the scope of a General Plan EIR, we do not see the need for modification of the description of potential impacts and mitigation.</p> <p>The comment on the appropriateness of a land use arrangement reflects a conclusion about generally accepted land use guidelines which will be considered by the City Council. No specific response is required in the EIR because an environmental issue is not raised.</p>
General Comments	<p>The view corridor would change in character, from a natural environment to a built environment, with a landscaped corridor adjacent to the freeway. The percentage reduction in views noted by the commentor will not occur; the views will still be there, they simply will be different -- a point that the EIR recognizes in stating that the character of the area will change. The views to the lake and the hills from I-80 are intended to be retained. The Proposed General Plan has policies that a view corridor be retained and requires the Policy Plan for Lower Lagoon Valley to implement these policies.</p>
<u>Transportation</u>	
p. 26	<p>The purpose of the EIR is to evaluate the consequences of adoption of the Proposed General Plan. Because the 30-percent TSM requirement is a specific standard in the Plan, we have no basis for assuming that this standard will not be applied. The EIR cannot speculate about the City's failure to implement policies and standards that would be adopted; instead, the EIR proposes that the annual report on the Plan include information needed to monitor Plan implementation. This is an adequate response to the issue raised. Detailed procedures on TSM monitoring would be included in the TSM ordinance to be adopted after Plan adoption. It would be in this ordinance, not in the Plan EIR, that contingency arrangements, enforcement and penalties for violations would be addressed.</p>

TJKM has addressed the consequences of not meeting the 30-percent target in the revised *General Plan Transportation Study*, which is included in this Addendum. This revised study incorporates specific information about the consequences of not achieving a 30-percent trip reduction goal.

- p. 139 The point about a failure to attain a TSM goal is valid in that attainment of less than 30-percent reduction of vehicle trips could result in an increase of auto emissions, but this would depend upon the type of TSM programs implemented. A 30-percent TSM target for the business park areas is a conservative goal which is felt to be easily attainable. We disagree with the suggestion that the EIR "presupposes advances in technology." Automobile manufacturers have been making cars that produce fewer emissions per mile travelled than older cars, and further reductions are required by federal law. As older cars are "retired," the overall fleet becomes "cleaner." This progression is reflected in URBEMIS which is the analytical tool recommended by the San Francisco Bay Area Air Quality Management District for impact analysis. With this in mind, we believe that it is appropriate to rely on this model in the Plan EIR and that its use is wholly consistent with CEQA Guidelines. (Also see the response to the comment regarding p.37 in the upcoming section on Conservation.)

Conservation

- p.37 The Sacramento Air Quality Plan includes a detailed inventory of emissions but an analytical model of the air basin is not scheduled to be completed and calibrated until 1991-92. Only with such a model will air quality planners be able to determine the precise scope of actions needed to achieve and maintain federal and state air quality standards. These are set to protect public health, livestock and vegetation. When this model is available, it will be possible to determine what specific actions should be undertaken by the City to ensure that the standards will be maintained over the long-term. The General Plan recognizes this situation in the discussion of air quality, so we do not believe that additional analysis is warranted at this time, given the City's commitment to re-examine the Plan when the air quality model is completed. The following text is hereby inserted into the text of the Draft EIR on page 40 at the end of text on air quality to further address this issue:

The City of Vacaville, although not a member of SACOG, has been actively involved in the development of SACOG's "Regional Air Quality Plan - 1990" and in developing an approach to dealing with the requirements of the California Clean Air Act (CCAA) on a coordinated, regional approach. The mechanism for responding to the CCAA has not been firmly established at this time. The Regional Air Quality Plan is an interim plan designed to begin the process of reducing air pollutants in the Sacramento air basin while a detailed atmospheric model is developed to provide a clear picture of atmospheric interactions.

The Regional Air Quality Plan was released in early 1990. Section IV, "EMISSIONS CONTROL STRATEGY," identifies five basic approaches to reducing the emission of ozone precursors. Of these five basic approaches, three are in areas where the City has no jurisdiction. Mobile Source Emission Controls (mechanical devices on motor vehicles), Stationary Source Emission Controls (mechanical devices on industrial plants and manufacturing processes) and Area Source Emission Controls (regulation of product chemical contents and business processes) all fall under the jurisdiction of the Federal and State government and the Yolo-Solano APCD. The City has jurisdiction in each of the other two categories: Transportation Source Emission Control (restricting or discouraging auto use, making roadways more efficient) and Indirect Source Emission Control (land use patterns).

The Regional Air Quality Plan includes a summary of transportation and land use related measures for various jurisdictions to consider implementing. Those measures are listed on the attached "FIGURE I-5 SACRAMENTO AIR QUALITY MAINTENANCE AREA TRANSPORTATION CONTROL MEASURE PROGRAM IMPLEMENTATION MATRIX." The following is a summary of how Vacaville has responded in the Proposed General Plan to each element recommended for the City's consideration.

AREAWIDE CARPOOL MATCHING - Policy 6.4.-I1 requires development and implementation of a TSM ordinance to reduce peak-hour traffic at certain sites by a minimum of 30 percent. Carpool matching is a typical TSM measure, coordinated by the City, Caltrans and employers.

CITY TRIP REDUCTION ORDINANCE - The TSM ordinance is essentially the same as a T.R.O.

EMPLOYER-SPONSORED CARPOOL - This is a typical TSM measure.

AUTO RESTRICTED PERIODS - This would be an element of a Trip Reduction Ordinance, and would specify times or days for a mandatory reduction in auto use; it could be an element of the TSM ordinance.

SIGNAL SYSTEM AND ROADWAY IMPROVEMENTS, VEHICLE RESTRICTIONS - Signal synchronization is not a General Plan issue. Roadway improvements are specifically analyzed in Chapter 6 of the Proposed Plan Appendix 11 of the DEIR. Vehicle Restrictions (i.e. delivery vehicles prohibited at certain times) could be a TSM measure.

FREEWAY RAMP METERING - Implementation of such a program would be Caltrans' responsibility.

FLEXTIME - This is a typical TSM element.

PARKING PRICING/SUPPLY LIMITS - The City has specifically opposed such proposals in the past for the following reasons:

- a) Vacaville has no existing fee-parking areas. Implementing fee-parking would result in considerable expense, and could be easily subverted.
- b) Vacaville is not part of a major urban area, served by a comprehensive bus network. Without this, reduced parking would not simply reduce trips - it would deny people reasonable access to needed services and facilities.
- c) Placing parking restrictions on Vacaville shopping and employment centers would make the city less attractive for that type of development. Because the city currently has an undersupply of commercial and employment opportunities, residents must drive to other communities to shop and work. Development of commercial and employment opportunities to balance existing and anticipated residences, as envisioned in

the Proposed General Plan, would reduce this need. Implementing parking restrictions would slow or stop achievement of such a balance, especially if neighboring communities did not undertake similar restrictions.

Plan policies specifically call for the provision of sufficient, as opposed to reduced, parking spaces.

PARK AND RIDE LOTS - Policy 6.4-I8 of the Proposed Plan calls for the City to work with agencies such as Caltrans in locating Park and Ride lots in appropriate locations.

TRANSIT SERVICE EXPANSION - Policies 6.4-I6 and -I7 of the Proposed Plan specifically call for expansion and improvements to the bus system.

BIKEWAYS AND BIKE STORAGE - The Proposed Plan designates an extensive bikeway network to support commute as well as recreational use, and specifies that bike storage facilities be built (Policy 6.5-I3). Provision of bike use support facilities could also be an element of the TSM ordinance.

TELECONFERENCING AND TELECOMMUTING - These are not General Plan issues.

ALTERNATIVE FUELS AND ENERGY SOURCES - The Regional Air Quality Plan identifies this as a area where "additional research is required."

MIXED LAND USE REQUIREMENTS - The Proposed Plan aggressively pursues this option, both in the mapped location of residential uses near commercial/industrial sites and in the requirement that business and industrial park areas have a component of employee-serving commercial uses to reduce vehicle usage (see Pages 2-22 and 2-23).

JOBS-HOUSING BALANCE - The Proposed Plan provides a better balance than exists today, and also provides a better balance than would result if the existing (1980) plan were built out (see DEIR Table 5.1-A)

PUBLIC AWARENESS CAMPAIGN - This would be a City-run program with assistance from employers involved in the TSM program. Such a campaign is typically part of a TSM ordinance.

The interim Regional Air Quality Plan identifies such programs as carpools and auto-restricted periods as the most immediately-needed programs, but also as the programs with the least long-term effect on air quality. Mixed land use patterns and a community with a balance of jobs, commercial uses and housing have the greatest long-term potential to reduce auto use and thereby air pollution. It is in these areas that the Proposed General Plan is the strongest.

- p. 38 URBEMIS makes no assumption about changes in emissions that are not required by current law, not does it assume any change in air quality standards. In fact, the model only projects changes in emissions and does not assess whether standards will be attained. The EIR makes no statements about what is required to "achieve legal levels of attainment." It is acknowledged that there is debate within the community of planning professionals over the effects of low-density development on air quality. (Also see response above to comment regarding page 37.)
- p.39 The comment reflects an opinion that is not substantiated by any analysis of specific conditions that would occur with implementation of the Vacaville General Plan. (Also see response above to comment regarding page 37.)
- p. 111 Speculation about the effects of requiring 100-year protection is beyond the scope of a General Plan EIR; such issues are properly addressed in the context of environmental analysis for specific drainage programs that would be implemented following completion of the FEMA map updating and specific drainage plans. Additional mitigation is not warranted in the Plan EIR.
- p. 110 The phrase "all upstream reservoirs are needed to fully mitigate existing problems and future impacts from development," may be taken out of context. The Ulatis Creek Watershed Study states that on-site detention will have to mitigate future impacts caused by that development unless the upstream reservoirs are constructed. Upstream reservoirs can help existing problems, but that's not the responsibility of new development.

The issues raised are properly addressed during subsequent environment review that will occur as part of implementation of the Plan proposals on a project-specific basis. As with any potential infrastructure impacts, the Plan EIR is simply the first tier of analysis; more details will follow as the projects are defined through preliminary engineering and further environmental review is conducted.

The four upstream reservoirs proposed in the Ulatis Creek watershed Study will eliminate the existing overflow and ponding areas for a 10-year event. Buildings within floor-prone areas must provide finished floor elevations above the 100-year water surface elevation.

The Ulatis Creek Watershed Study is public information. The Department of Public Works has copies of the adopted Ulatis Creek Study available to the public. The EIR Bibliography shall incorporate the following text:

All documents listed in the Bibliography are available from the Vacaville Planning Division or the Vacaville Planning Division will be able to refer inquires to the appropriate agency.

The Ulatis Study is the information that FEMA will use to update its maps. We have the information now and are using it for Lagoon and West Valleys.

The City will be requesting Federal assistance in funding these reservoirs. The first phase is to perform a cost-benefit study to determine if it is fundable. If Federal funds are not available, which is highly likely, then an alternate funding method will need to be approved. The City does have the expertise to construct flood control facilities.

p.117 These are valid points; however, such detail is appropriate in the Lower Lagoon Valley EIR, which will include more specific studies of water quality impacts. This level of detail is not within the scope of a General Plan EIR.

p.106 Figure 2-1 of the Proposed General Plan identifies the creekways and areas of riparian vegetation within the planning area. This figure is referenced on page 113 of the EIR. The first paragraph on page 113 also addresses the

existence of vernal pools within the study area. It is not within the scope of a General Plan EIR to identify each wetlands area that may exist. This is appropriately addressed as a part of environmental documentation and review for specific project proposals.

General
Comments

The Ulatis Creek Watershed Study contains the information and data that FEMA will use to update its maps. The information in this document will be utilized in the development of plans within the study area.

The City will be requesting Federal assistance in funding the proposed reservoirs. The City's first step will be to perform a cost-benefit study to determine if it is fundable. If Federal funds are not available, which is highly likely, then an alternate funding method will need to be approved. The City does have the expertise to construct flood control facilities.

Alternatives

p. 133

The sketch plans did consider a broad range of densities on sites where intensification of land use would be appropriate. These included urban high density options around Downtown and adjacent to the Performing Arts Center and Allison Drive, as well as medium density residential development at selected locations. Further, in the public hearings on specific sites, the General Plan Committee considered a range of land use options proposed by the development community which in sum represented a very broad range of possible growth scenarios. Further, Sketch Plan C was specifically intended to preserve the form and character of the city; this alternative was rejected by the Committee after lengthy debate in favor of the proposed Land Use Diagram.

The authors of this EIR believe that the range of alternatives considered by the General Plan Committee during its deliberations, as summarized in Chapter 5 is sufficiently broad to meet the requirements of CEQA. These alternatives were judged reasonable and feasible during the plan-making process. In fact, CEQA Guidelines

permit alternatives to be discarded as infeasible, and define "feasible" in Section 15364 as follows:

"Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors.

CEQA does not require analysis of every conceivable alternative. It requires only that enough alternatives be considered to provide the public and decision-makers with a fair comparison. In the case of the General Plan, the alternatives clearly showed choices for the direction of growth, ultimate city boundaries and population holding capacity. (Also, see response to comments regarding p.61 in the previous section on Land Use.)

Regarding the two specific proposals, Option (a) is addressed in part by Sketch Plan C, while Option (b) is directly addressed by the planned redevelopment of the Basic site east of Downtown and the commitment to Residential Urban High Density housing to support Downtown. The land use concepts for the Core do encourage alternative modes, such as walking and bicycle use.

The comments on transit use are misleading in that the General Plan anticipates a 30 percent diversion of trips to and from major employment centers, which certainly is comparable to the statistic quoted for Bellevue. This could be accomplished by transit, paratransit, carpooling or vanpooling, through the Transportation Systems Management program required by the Proposed General Plan.

Turning to Option C, the implications of proposed residential development at Plan densities are fully addressed by the EIR. The urban service area boundary is specifically intended to prevent further expansion, and the authors of this EIR have no basis for speculating about the City's failure to implement a policy that is presented as the keystone of the Plan.

Finally, we submit that close inspection of the Plan Diagram and the sketch plan alternatives will show that many options for a distribution of residential land use with logical neighborhoods served by commercial centers and public facilities were considered during the General Plan revision process. The North Village concept for the Messenger property, for example, is specifically designed to create the environment described in this comment.

In conclusion, this EIR reports on the alternatives that were considered by the General Plan Committee as embracing a reasonable range of choices for Vacaville's future. The fact that some concepts were not considered does not invalidate the effort to update the General Plan nor render the EIR inadequate. CEQA Guidelines acknowledge the unique nature of a General Plan by allowing it to serve as its own EIR, clearly recognizing how the plan-making process works.

FIGURE 1-5

SACRAMENTO AIR QUALITY MAINTENANCE AREA
TRANSPORTATION CONTROL MEASURE PROGRAM IMPLEMENTATION MATRIX

AUTO USE	PLACER COUNTY															
	CITY OF LINCOLN															
TRAFFIC FLOW	CITY OF LINCOLN															
	CITY OF LINCOLN															
PARKING	CITY OF LINCOLN															
	CITY OF LINCOLN															
TRANSIT	CITY OF LINCOLN															
	CITY OF LINCOLN															
NON-MOTORIZED	CITY OF LINCOLN															
	CITY OF LINCOLN															
CLEAN FUELS	CITY OF LINCOLN															
	CITY OF LINCOLN															
LAND USE	CITY OF LINCOLN															
	CITY OF LINCOLN															
PUBLIC AWARENESS	CITY OF LINCOLN															
	CITY OF LINCOLN															

Primary 0 = Secondary S = Study



PERMA-BILT DEVELOPMENT

June 20, 1990

RECEIVED

Greg Werner
City of Vacaville
Planning Department
650 Merchant St
Vacaville, CA 95688

JUN 20, 1990

CITY OF VACAVILLE
PLANNING DIVISION

RECEIVED

JUN 20, 1990

CITY OF VACAVILLE
PLANNING DIVISION

RE: Proposed Vacaville General Plan DEIR

Dear Greg:

As you know we own and/or have agreements to purchase on 800 +/- acres in the West Valley North Sector of the City of Vacaville's proposed General Plan (Sector 9). I have attached a copy of the General Plan proposal and outlined the property we control.

This letter serves as our official response to the Draft Environmental Impact Report and General Plan.

1 - Summary

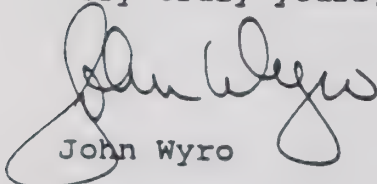
- a) Chapter 1, Page 6: 10-year limit on development in "West" valley should read "north" valley.

2 - Environmental Setting, Impact Analysis and Mitigation

- a) GP Chapter 6, Page 7: Programmed freeway improvements should be listed (I-80 and I-505) and shown in a figure
- b) EIR Chapter 4, following Page 26: Figure 3 does not clearly illustrate Pena Adobe/I-80 and Cherry Glen/I-80 interchanges
- c) EIR Chapter 4, Page 32: What are the two designs referred to in the last sentence under Cherry Glen Road/Lower Lagoon Valley Road and I-80 hearing?
- d) EIR Chapter 4, Page 74: Is there a conflict with Policy 2.2-17 in the timing of development? "Cannot occur before (prior to) adequate services are available?"

- e) EIR Chapter 4, Page 116: Paragraph 4, First sentence: The last word in this sentence and Policy 8.1-64, "watersheds" is in error. It should be "waterway" or "riparian corridor." If it stays as "watersheds," it is in direct conflict with any development in the west valley.
- f) EIR Chapter 4, Page 118: Second paragraph - First sentence is in error, as there is no plan to construct reservoirs for water supply.
- g) EIR Appendix II, Page 6: What year was used for buildout of the General Plan for purposes of estimating the increase in through traffic? Was the through traffic increased based on a one percent annual compound growth rate or a simple growth rate?
- h) EIR Appendix II, Fig. 10.1: The names used for the Lagoon Valley/I-80 and Cherry Glen/I-80 interchanges are confusing. Pena Adobe Road should be shown on this Figure.
- i) EIR Chapter 4, Page 87: 3rd paragraph under Williamson Act. The statement ".....and almost all the land in Pleasants Valley is under active contract..." is in error. There is only 204 acres of our 800 acres that is under contract and 60 +/- of those had filed non-renewal notices in 1986. In addition 160 of the 204 is either hillside or flood plain and therefore unusable as agricultural land. I believe the author was referring to upper Lagoon Valley which is not part of the West Valley North Sector of the General Plan.
- j) EIR Chapter 4, page 88: The 2nd paragraph is also in error. As was mentioned under (i) above, I believe the author is referring to the upper Lagoon Valley. In fact almost 75% of the land under Williamson contract is protected from development by the General Plan policy because of the 25% slope restriction.

Very truly yours,



John Wyro

JW:dd
Enclosure

Response to Perma-Bilt Development

- 1 (a) Correction noted. The text on page 6 in paragraph 3 shall be revised as follows:

...urban expansion for 10 years in West Valleys North ...

- 2 (a) Plan comment; no response necessary. However, the commentor should note that the Proposed General Plan has been revised to indicate freeway interchange upgrades in Table 6-1 and Figure 6-2.
- 2 (b) The purpose of this diagram is to depict traffic volumes on roadway segments. As such, we believe it serves its purpose; details on specific interchange configurations are presented in TJKM's revised report included in the Appendix.
- 2 (c) The two designs involve, first, the overcrossing design and, second, the type of interchange to be constructed (partial cloverleaf or diamond).
- 2 (d) The authors of this EIR do not perceive a conflict. The General Plan establishes a long-term commitment to provide adequate public facilities where urban development is anticipated on the Land Use Diagram; the Plan itself does not establish a phasing program, which is to be done subsequent to Plan adoption (see Policy 2.2-II).
- 2 (e) The statement is a correct quote of the policy in the General Plan. However, the implementing policies in the Plan clearly focus on the creeks and riparian corridors, so the intent of the policy is not as broad as it implies. (A modification of the Plan policy would be in order to clarify intent, but this issue is beyond the scope of the EIR.)
- 2 (f) Correction noted, as the reservoirs would be an unreliable source of potable water. The text on page 118 shall be modified as follows:
- [To supply ...2010] Construction ...upstream flood water detention reservoirs ...
- 2 (g) The buildout year is 2010 and a compound growth rate was used at a rate of 1 percent per year.

- 2 (h) We believe the figures adequately portray the technical information.
- 2 (i) The term Pleasants Valley is used broadly; the map shows the distribution of land under contract and the text on page 87 shall be modified as follows:
- ...both the lower Vaca Valley and almost all of the hillside land in [Pleasants Valley] West Valleys North and Upper Lagoon Valley ...
- 2 (j) Correction noted; the text on page 88 shall be modified as follows:
- Active contracts exist in [Pleasants Valley] the West Valleys North Sector, including Vaca Valley, and the Cherry Glen Road area, along Gibson Canyon Road, [Cherry Glen Road] and Leisure Town Road ...

CITY OF FAIRFIELD

Incorporated December 12, 1903

1000 WEBSTER STREET
FAIRFIELD, CA 94533
[707] 428-7461

DEPARTMENT OF PLANNING AND DEVELOPMENT

RECEIVED

June 20, 1990

JUN 21 1990

CITY OF VACAVILLE
PLANNING DIVISION

Maureen Traut, Senior Planner
City of Vacaville
Planning Division
650 Merchant Street
Vacaville, CA 95688

RE: General Plan Draft EIR

Dear Ms. Traut:

We have reviewed the Proposed General Plan and the Draft Environmental Impact Report and offer the following comments:

1. Based on a meeting between the City of Fairfield and the City of Vacaville on June 15, 1990, it was decided that Nelson Road will terminate in a cul-de-sac at the northern Fairfield city limits, eliminating access between Lagoon Valley and Paradise Valley. This action should be taken into consideration in the traffic analysis.
2. The assumption that traffic levels may be reduced by 30% through implementation of a Transportation Systems Management program may be optimistic. The General Plan should be more specific as to how the 30% reduction is to be achieved. A 30% reduction is very aggressive and needs to be supported by equally aggressive mandatory TDM and TSM planning.

We agree that a 30% reduction is a good goal, but it should not be incorporated in the traffic model results as the base case model. Analysis should be conducted to determine the traffic, noise and air pollution impacts if 1) there was no reduction as a result of TSM and 2) if there was a reduction, but to a level less than 30%.

3. The General Plan recommends TSM measures that limit vehicle use in preference over measures that extend the commute hour (i.e. it favors ride sharing and public transit over staggered work hours). We feel that trip reductions in the peak hour should be achieved in any way possible. Requiring cooperation from developers, such as staggered work hours, should be encouraged, not discouraged, as one means toward achieving a 30% reduction in peak hour vehicle trips.
4. The EIR fails to address traffic impacts that are external to the City of Vacaville. Traffic and noise impacts on resulting from increased traffic in Fairfield from I-80, Lyon, Peabody, Nut Tree, Leisure Town and Vanden Roads should be addressed. In addition:
 - a) No traffic projections are made for Lyon Road.
 - b) Figure 6-2, of the General Plan shows six lanes for Peabody Road and four lanes for Vanden Road. Our previous discussions with Solano County and the City of Vacaville have been for Peabody Road to be four lanes wide. Walters Road and Air Base Parkway are not planned to accommodate the traffic projections shown for Peabody and Vanden Roads.
5. The volumes of traffic on I-80, Vanden Road and Peabody Road exceed the capacity of these roads. For instance, I-80 would need an additional 8-10 lanes and Peabody Road would need an additional 4-6 lanes to accommodate the projected traffic. The high degree of external-internal trips is, in large, partly due to the lack of a jobs-housing balance, and the large percentage of shoppers coming from outside of Vacaville. Sixty-six percent of the shoppers and 65% of the employees are projected to come from outside of Vacaville, and 53% of all employees are projected to enter Vacaville through Fairfield (44% from I-80 and 9% from Peabody Road). Consideration should be given to a jobs/housing/retail balance to mitigate the high levels of traffic.
6. The General Plan should contain policies which address the coordination of the transportation element and the countywide congestion management plan, which is currently being developed. These policies should include a commitment to an equitable cost distribution for regional transportation facilities.

Maureen Traut
June 20, 1990
Page three

7. The specific development concept within the Lower Lagoon Valley should minimize hillside development and take other steps as necessary to maximize the visible open space between Fairfield and Vacaville.
8. Implementing policy 2.1-I2 of the General Plan directs the City of Vacaville to "Negotiate" with affected jurisdictions to ensure creation of agricultural zones, open space corridors and community separators. This policy should be worded to reflect the development of a plan through a cooperative effort between affected jurisdictions, as is already occurring.
9. The General Plan states that existing water entitlements can serve a population of 90,000. A statement should be included as to the amount of additional entitlements that are necessary to serve the population at build out of the proposed General Plan. As a conservation measure, consideration should be given to using treated effluent from wastewater treatment for irrigating landscape areas such as parks and median strips.

Thank you for the opportunity to review the proposed General Plan and Draft EIR. If you have any questions, you may call me at (707) 428-7446.

Sincerely,

EVE SOMJEN
Principal Planner


BY: JOHN JIMERSON
Assistant Planner

ES:JJ:dav

Response to City of Fairfield

1. Comment noted. Subsequent meetings to the June 15, 1990, meeting have occurred and the future of Nelson Road is still being discussed. The effect of the termination of Nelson Road has preliminarily been analyzed as part of the environmental analysis of the Lower Lagoon Valley policy plan. With the exception of Lagoon Valley Road and the Cherry Glen Interchange with Interstate 80, traffic impacts on the General Plan roadway network attributable to terminating Nelson Road at the Fairfield city limits are not significant. As part of the Lower Lagoon Valley traffic analysis, appropriate mitigation for the Cherry Glen Interchange and Lagoon Valley Road are being determined. These will be reported in the Lower Lagoon Valley EIR.
2. The implementing policies in the Transportation Element specifically call for adoption of certain ordinances to implement a TSM program and to require major employers to adopt such programs. The language is directive and there is not discretion implied by terms such as "establish," "adopt," and "require." However, actual details are appropriately contained in such implementing ordinances, not in a General Plan.

Because the TSM commitment is expressed in much stronger terms than just a goal, we believe it is appropriate to incorporate that reduction into the model. The assumption is that if General Plan directives are not met, then subsequent phases of development would not occur. The mitigation monitoring and reporting program described on pages 9 and 10 of the EIR is intended to serve as the means of reviewing progress towards these objectives.

The 30-percent reduction in traffic resulting from TSM measures was based on analysis of other city TSM programs (i.e., Roseville, Pleasanton, Sacramento). In addition, TJKM has added an analysis to its *General Plan Transportation Study* (included as an attachment to this Addendum) which shows the impact to roadways if the TSM program is not implemented.

The City believes that the 30 percent target is a conservative and realistic TSM goal. The City does acknowledge that there appears to be disagreement among experts about the level of reductions that can be reached through TSM. However, as previously noted, 30 percent is thought to be achievable and the City has committed itself to work with local employers in developing a realistic ordinance, easily implemented by all parties. (Also see response to comment 2 from the Department of Transportation.) In response to comments received from the commentor and

others regarding the implementation of TSM and other mitigation measures, the following text is hereby incorporated into the EIR at the end of Section 1.5:

Mitigation Monitoring Program

At the time of adoption of the Proposed General Plan, the City Council will adopt a Mitigation Monitoring Program in order to comply with CEQA. It is expected that such a program will be based on an annual report to the Planning Commission and City Council. The report would address each mitigation measure and how it is being implemented. If the Plan and EIR call for a study to be prepared, an action considered, or an ordinance implemented, the annual report would specify whether the mitigation has happened.

3. Comment noted; no response required for purposes of the EIR. It should be noted that the TSM Ordinance will specifically address types of TSM measures.
4. Comment acknowledged. (a) Pending the outcome of the decision to terminate Nelson Road, Lyon Road is not needed to provide additional capacity on the proposed General Plan circulation network. The traffic model assumes external trips from I-80, Peabody, Nut Tree, Leisure Town and Vanden roads. (b) Traffic projections indicate that there is a need for Peabody Road to be six lanes within the study area and south of the study area. This information is contained within the traffic model and will be utilized as part of a countywide traffic data base in preparing a countywide traffic model.
5. Comments noted. It should be noted that the Proposed General Plan has an employable residents/jobs ratio of 1:1.2 at buildout, which is significantly better than the existing General Plan.
6. Solano County have jointly embarked on a County-wide traffic model to predict traffic volumes and impacts for the year 2000. This is the first step in developing a congestion management plan (CMP) as will be required for future Proposition 111 funding. The CMP process, when adopted by all participating agencies, will determine impacts outside the jurisdiction in which a development could occur. As suggested by Ms. Somjen, Fairfield's principal planner, "a commitment to an equitable cost distribution for regional . . . facilities" is premature. This, again, has to be adopted by all agencies potentially impacted.

Until details on the Congestion Management Plan are provided, we do not see the need to anticipate them in this General Plan. The City's infrastructure financing policies are intended to ensure that service levels are maintained. Similarly, a monitoring program is to be established "so linkages with necessary improvements can be established and funded" (Policy 2.2-I10). We believe these plan policies set a basis for participation in the congestion management program.

7. Comment noted. Plan policies setting limits on hillside development and calling for community separators respond to these concerns.
8. Comments noted. It should be noted that the Land Use Element contains wording that describes the Community Separator Overlay and speaks to the need to use zoning, joint powers agreements between Vaca and adjoining cities and/or acquisition of development rights by a public or non-profit agency to implement the Community Separator concept. The City intends to cooperate with all adjoining jurisdictions.
9. The existing wastewater treatment plant is a primary treatment plant and it is not feasible to utilize the effluent as irrigation water. However, the Proposed General Plan contains a policy (8.4-I6) which states, "whenever possible, use non-treated water for irrigation in large landscaped areas."

KNOX, RICKSEN, SNOOK, ANTHONY, HARPER & ROBBINS

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June 18, 1990

VIA FEDERAL EXPRESS

City of Vacaville
Community Development Department
Planning Division
650 Merchant Street
Vacaville, CA 95688

RECEIVED

JUN 20 1990

Re: Proposed Vacaville General Plan
Draft Environmental Impact Report

CITY OF VACAVILLE
PLANNING DIVISION

Gentlemen:

Our firm represents the family members who own approximately 275 acres in the Cherry Glen Road area of Lagoon Valley (P.R.). The first parcel was acquired by the family in 1897.

This area is designated as Sector 9, West Valley-North, although the area is more accurately referred to as part of the geographical unit known as Lagoon Valley. As indicated on the enclosed copy of the USGS Fairfield North Quadrangle (photo revised, 1980), (Exhibit "A") Lagoon Valley runs southerly from Foothill Drive across Interstate 80 and includes Sector 8 or the West Valley-South.

North of Lagoon Valley in the area running somewhat northerly from Foothill Drive past Vaca Valley Road is a valley known as Vaca Valley and further north is Pleasants Valley. These geographical distinctions are important in an understanding of Vacaville's proposed General Plan, its diagrams and its policies. Our references will be primarily to that area of Lagoon Valley north of Interstate 80, hereafter referred to as "Upper Lagoon Valley".

We support the designation of the land uses for this area as depicted on the General Plan Diagram.

The proposed Vacaville General Plan, Plan Policies properly address the community's form and image including the protection of hillsides, ridge lines, riparian corridors and creeks; community separators; and open space for the managed production

City of Vacaville
Community Development Dept.
June 18, 1990
Page 2

of resources, to wit: a commitment "to maintaining viable agricultural areas".

With respect to Upper Lagoon Valley, the DEIR's discussion of open space and agricultural land, Chapter 4.6, pages 85 - 89 is oversimplified and in some cases inaccurate.

"The City is committed to maintaining viable agricultural areas. . ." (Draft General Plan Chapter 3, Page 2) The fact is that there is no viable agriculture in Upper Lagoon Valley.

The DEIR recites the strengths and weaknesses of the USDA's soil classification system, the Storie Index rating system and the Land Capability Classification System, but fails to apply or analyze these classifications to specific areas, along with equally important factors that determine whether viable agriculture exists. The weakness of these indexes is that each deals with a soil-related quantification and, as stated, does not take into consideration all the essential items that allow an area to be a viable agricultural unit.

In applying many criteria to Upper Lagoon Valley we find that the small pocket of land is not a viable agricultural unit. Upper Lagoon Valley as described in the General Plan diagram is approximately 1,370 acres comprised of an existing 72 separate parcels under 52 separate ownerships. With respect to our clients' parcels:

1. The property is bisected by Laguna Creek and its tributaries as shown on the USGS map.
2. Twenty (20) acres of the property is located within steep hillsides.
3. Portions of the property are within the rights of way of Cherry Glen Road, Pleasants Valley Road and the Pena Adobe overcrossing from Interstate 80.
4. The property is adjacent to thirteen (13) acres of property already within the City limits.
5. Although the property is served with water from the Solano Irrigation District, such water can only be delivered during the late spring and summer months and the water cost is almost \$3.00 more per acre foot than the same water furnished to property owners east of Vacaville. The owners have not used SID water since 1981, although as part of their property taxes they

City of Vacaville
Community Development Dept.
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pay \$2,640 per year in SID assessments and \$5,266 per year in SID standby charges.

6. The property is not level. In fact, the larger fields would require several thousand cubic yards of dirt being moved and even then the fields would drain in several directions. This huge expense has never been justified.

7. Historically the property was planted to deciduous fruit crops; pears, apricots and prunes at a time when the entire Vacaville area was considered an early fruit region. In the mid-1960's acreage was also planted to varietal wine grapes. Because of substantial dollar losses, in the early 1980's all trees and vines were removed. California Cannery and Growers, at that time the largest California agricultural cooperative, had gone bankrupt, eliminating a market for pears. The vines were removed because the owners had been unable to sell any grapes between 1979 and 1982 due to the depressed wine industry and the fact that this area lacks a north coast "appellation". Sun Sweet, the largest dryer of prunes, closed its dryer in Fairfield and will close its dryer in Vacaville this year. Tree or vine crops are not an economic agricultural use.

8. Between 1982 and the current date, repeated attempts have been made to obtain field crop operators for the property and no interest has been received. Instead, the property has been planted to nonirrigated grain crops at nominal rent. The return to the local economy as reported in the Solano County Department of Agriculture's Agricultural Crop Report is nil.

9. While some of the Upper Lagoon Valley area contains good soil, the economic reality dictated by the cost of equipment; lack of markets; the cost of water; expense and restrictions on the storage and use of pesticides and herbicides; restrictions on aerial application; restrictions on agricultural burning; the difficulty of obtaining agricultural labor; and the difficulty of transporting farm machinery to this isolated area clearly demonstrate that an economically viable agricultural industry will never exist in this area.

10. The income from the property has not covered its property taxes for the past eight years.

11. The balance of Upper Lagoon Valley is divided into numerous small lots and includes the Sunny Hills rural residential subdivision.

City of Vacaville
Community Development Dept.
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Even assuming marginal agricultural uses, the implementation of General Plan policies will seriously adversely impact the area.

1. Cherry Glen Road and Pleasants Valley Road already serve as a main arterial to the developed portions of northern Vacaville and serve as the major route to Lake Berryessa and Lake Solano.

2. Even limited development in Southern Lagoon Valley will dramatically impact the traffic in this area necessitating the widening of the Cherry Glen and Pena Adobe interchanges, and the widening and possible reconfiguration of Cherry Glen and Pleasants Valley Roads.

3. The stated "overall objective" of streets and highway improvements is "to complete a core street system which loops around the City". Improvements and realignment of Cherry Glen and/or Pleasants Valley Road and the realignment of the Foothill Drive intersection with Pleasants Valley Road are contemplated. Any such widening or improvements will directly impact the adjacent lands.

4. California Drive will be extended across Interstate 80 to relieve traffic congestion in Southern Vacaville. It is estimated that the taking of land by such a project, and the isolation of lands between California Drive and Interstate 80, will approximate 60 acres.

The DEIR (Chapter 4, page 47) in referring to Figure 5 that "both the Lower Vaca Valley and almost all the land in Pleasants Valley is under active contract with the exception of the two parcel contracts (no. 612-13) expiring in 1991". This is incorrect.

While most of the land in Vaca Valley is subject to Williamson Act contracts, almost none of the developable land in Upper Lagoon Valley is under active contract. (I believe that the consultant may be referring to Upper Lagoon Valley with the incorrect reference to Pleasants Valley).

Exhibit B outlines Lower Lagoon Valley on Figure 5 and analyzes the active agricultural preserve contracts in the valley.

As evidenced by this analysis, 67% of the land included in agricultural preserve contracts is hill or grazing land and would be protected from development under the proposed General Plan.

City of Vacaville
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Page 5

Only 79 acres, represented by 6 contracts on small parcels,
covers prime soils.

Very truly yours,

KNOX, RICKSEN, SNOOK, ANTHONY,
HARPER & ROBBINS

A handwritten signature in cursive script, appearing to read "William C. Robbins III", with a long horizontal flourish extending to the right.

William C. Robbins III

WCR:cd

RESIDENTIAL

- Rural (1:1 80 units/ac)
- Subdiv (1:1 20 units/ac)
- Gold Center (1:1 20 units/ac)
- Low Density (1:1 10 units/ac)
- Low-Medium Density (1:1 20 units/ac)
- Medium Density (1:1 10 units/ac)
- High Density (1:1 20 units/ac)
- Urban High Density (1:1 20 units/ac)
- Manufactured Home Park (1:1 20 units/ac)

COMMERCIAL

- General
- Neighborhood
- Service
- Highway
- Commercial Office
- Professional Office Restriction
- Downtown

BUSINESS/INDUSTRIAL

- Business Park
- Industrial Park

OTHER

- P Public/Institutional
- S Schools - Elementary
- PS Schools - Professional
- PR Private Recreation
- PP Public Park
- GB Greenbelt Bldg
- US Urban Open Space
- AO Agriculture/Open Space
- CS Community Separation Overlay
- DT Density Transfer Area
- TL Transmission Lines
- HL Hazardous Lands - See Safety Element

CIRCULATION

- F Freeway
- MA Major Arterial
- MI Minor Arterial
- C Collector

BOUNDARIES

- CL City Limits (as of April 1990)
- PA Planning Area

NOTES

- 1 Refer to Town Airport Land Use Plan and Main Street Airport Land Use Plan for open the local use limitations.
- 2 Land use for proposed park and school may vary according to local conditions. The plan is a general guide only and may be adjusted to meet the needs of the community.
- 3 The plan is based on the Long Term Planning Area Boundary and the Community Separation Overlay between Vacaville and Eureka. The plan is subject to change by the City of Vacaville and Eureka.


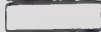
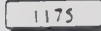




0 2000 4000 Scale in Feet
One Mile

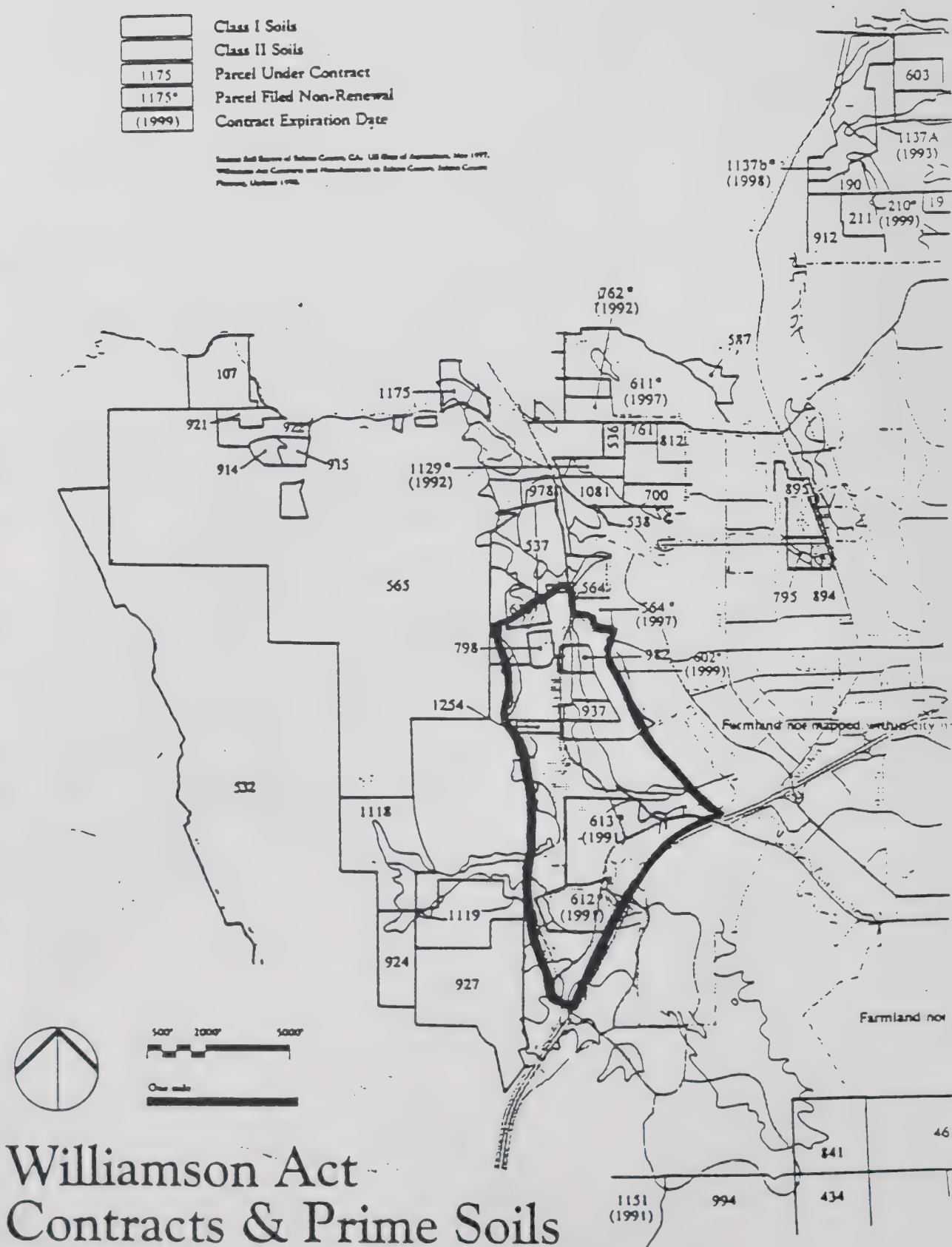
HAYNEY
WEITZ

Urban and Regional Planners

Vacaville General Plan Diagram

-  Class I Soils
-  Class II Soils
-  Parcel Under Contract
-  Parcel Filed Non-Renewal
-  Contract Expiration Date

Source: Soil Survey of Solano County, CA. US Dept of Agriculture, May 1997.
Williamson Act Contracts and Prime Soils in Solano County, Solano County
Planning, updated 1998.



Williamson Act Contracts & Prime Soils

Figure 5

FAIRFIELD NORTH QUADRANGLE

CALIFORNIA

7.5 MINUTE SERIES (TOPOGRAPHIC)

SE 1/4 MT. VACA 15' QUADRANGLE

Photorevised 1980

ES

11 2'30" 141 1:990 000 FEET 117.1 122°00' 38°22'

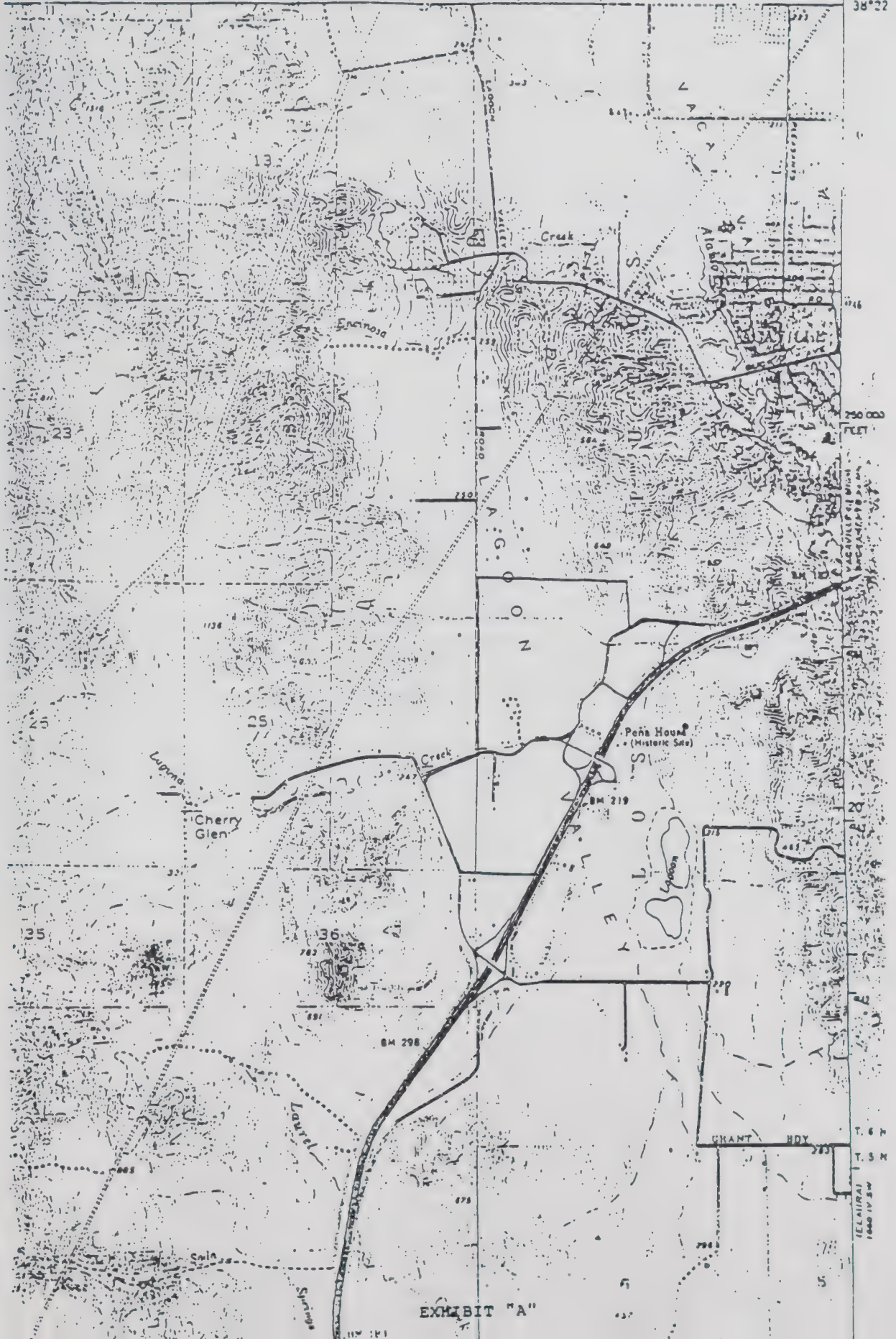


EXHIBIT "A"

ANALYSIS OF ACTIVE WILLIAMSON ACT
CONTRACTS IN UPPER LAGOON VALLEY

<u>Contract</u> <u>No.</u>	<u>Description</u>	<u>Total (Est)</u> <u>Acreage</u>	<u>Hill</u> <u>Land</u>	<u>Class 1</u>	<u>Class 2</u>
602	Cresswell				
	126-010-060	18	18		
	126-010-120	75	75		
	126-020-040	29	15	7	7
982	Bera				
	126-010-050	19	6	4	9
937	Gustafson				
	126-010-010	26	13	7	6
1254	Smith				
	122-030-020	15	4	11	
798	Bryant	23		23	
689		<u>40</u>	<u>35</u>	<u>5</u>	<u>—</u>
				<u>57</u>	<u>22</u>
TOTALS		<u>245</u>	<u>166</u>		<u>79</u>
			67%		23%

Upper Lagoon Valley - Estimated Acreage - 1370

Response to Knox, Ricksem, Snook, Anthony, Harper & Robbins

The comments regarding the need to consider additional information and not rely solely on soil classification schemes are valid, and the information presented in points 1-11 on pages 2 and 3 certainly offer an important perspective on the property in question. This information will be considered in the context of the General Plan proposals for the Upper Lagoon Valley; many of the details, however, are not appropriate in a General Plan EIR. With this in mind, the following additions to the impact analysis on page 95 are proposed.

Evaluation by Area. The agricultural lands along Pleasants Valley Road ... 1,019 acres. However, field crop operators have expressed no interest in this area during the past decade, according to local property owners, and efforts to establish vineyards have failed. The market for deciduous fruit crops is much weaker today than it historically was. Accordingly, while much of the flatland in Upper Lagoon Valley is considered prime, current owners contend that it is not an economically viable agricultural area.

Further, the EIR analysis of agricultural capability in Section 4.6 does acknowledge the strengths and weaknesses of individual classification systems, noting, for example, whether climate is considered and whether the maps are up-to-date and reflect changes in farming technology and markets.

This approach is valid for General Plan purposes and responds to questions posed by the Department of Conservation and the Department of Food and Agriculture in response to the Notice of Preparation.

Regarding the comment addressed to page 87 (not 47) of Chapter 4 of the EIR, we believe that Figure 5 correctly illustrates the distribution of land subject to Williamson Act Agreements. The text has been clarified to correct the reference (see response to Perma-Bilt's comments).



Ulatis Resource Conservation District
1170 N. Lincoln, Suite 110 - Dixon, CA 95620 - Phone: (916) 678-1655

Maureen Traut, Senior Planner
City of Vacaville Planning Division
Community Development Department
650 Merchant Street
Vacaville, CA 95688

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CITY OF VACAVILLE
PLANNING DIVISION

June 18, 1990

SUBJECT : PROPOSED VACAVILLE GENERAL PLAN
DRAFT ENVIRONMENTAL IMPACT REPORT

After reviewing the Proposed Vacaville General Plan DEIR, the Ulatis Resource Conservation District has the following comments:

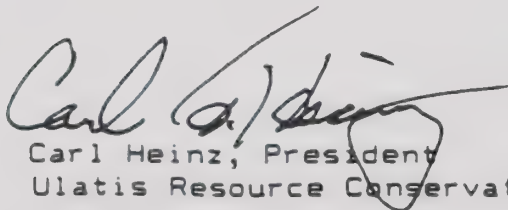
The Ulatis RCD is pleased to see that the impact of new development on Alamo and Ulatis Creeks has been recognized. And that this problem will be addressed by the construction of upstream reservoirs.

We agree that, as stated in chapter 4 page 110:

" all the upstream reservoirs are needed to fully mitigate existing problems and future impacts from new development"

Any questions regarding these comments should be directed to Maria Bofias, Ulatis RCD Technician (916) 678-1655.

Sincerely,



Carl Heinz, President
Ulatis Resource Conservation District

Response to Ulatis Resource Conservation District

Comment noted; no EIR response required.

MTC
METROPOLITAN
TRANSPORTATION
COMMISSION

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CITY OF VACAVILLE
PLANNING DIVISION

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June 15, 1990

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City and County
DORIS W. KAHN
HARRY G. BRITT

San Mateo County
JANE BAKER
TOM NOLAN

Santa Clara County
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Solano County
JAMES SPERING

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Association of
Bay Area Governments
DIANNE MCKENNA

S.F. Bay Conservation
and Development
Commission
ANGELO J. SIRACUSA

State Business
Transportation and
Housing Agency
BURCH BACHTOLD

Executive Director
LAWRENCE D. DAHMS

Deputy Executive Director
WILLIAM F. HEIN

City of Vacaville Planning Division
Community Development Department
650 Merchant Street
Vacaville, CA 95688

Attention: Maureen Traut, Senior Planner
Subject: Proposed Vacaville General Plan and Draft Environmental
Impact Report

Dear Ms. Traut:

This letter contains Metropolitan Transportation Commission (MTC) staff comments on the Proposed Vacaville General Plan and its DEIR. The plan contains policies for development through year 2010. Full buildout of the plan would result in an additional 21,000 dwelling units, 770 gross acres of commercial space, 280 gross acres of office space, and 1,550 gross acres of business and industrial park development.

1. Transportation Systems Management (TSM). The principle traffic mitigation strategy in the proposed general plan is a TSM program which would reduce the number of peak period trips by 30%. We support the City's efforts towards developing a TSM ordinance and working with future employers to reduce peak period trips. Of particular interest is the phased development program for large projects which would violate traffic standards if fully built out. Such a phasing program could help enforce the TSM ordinance and allow the City and developers more time to address future increments of traffic growth.

To further assist the City, we are enclosing two MTC publications which discuss aspects of TSM and traffic mitigation programs. "Key Considerations for Developing Local Government TSM Programs" weaves examples from several local governments' experiences into a discussion of TSM elements. "What We Do and Don't Know About Traffic Mitigation Measures" outlines staff and external agencies' thoughts and recommendations for efforts to reduce traffic volumes. We hope these two publications will be useful in the City's TSM planning efforts.

2. Freeway Impacts. Buildout of the proposed general plan would have substantial impacts on I-80 and several interchanges in the Vacaville area. The DEIR projects as many as 32,400 vehicles during the peak hour on I-80 west of Lagoon Valley in year 2010. The Strategic Transportation Planning Study (SACOG and MTC, 1989) projects 7,000 to 8,000 vehicles in the peak hour, peak direction in

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City of Vacaville
Page Two

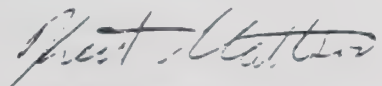
year 2015 along this same segment of I-80. The DEIR should estimate year 2010 freeway volumes with and without proposed development in Vacaville so that general plan buildout impacts can be clearly understood.

Even if the proposed TSM program successfully reduces peak hour trips by 30%, it appears I-80 would still be severely impacted by local development. The DEIR projects 25,000 to 28,000 peak hour trips on I-80 between Cherry Glen Road and I-505 in 2010 with TSM measures. Business park development in Lagoon Valley could be a large source of this traffic, particularly because the future road network has few viable alternative routes for local and regional traffic to use. Since I-80 will probably not have more than 10 lanes along this segment, the DEIR should explore alternative routes to accomodate more of the traffic anticipated from Lagoon Valley.

3. Transit. The TSM program would depend on public transit to help reduce drive alone work trips. The ability of public transit to reduce trips will depend a great deal on Vacaville's future land use. In general, the land use planning policies listed in the proposed general plan are not particularly supportive of transit. For example, the vast majority of housing units would be at densities of 5 units or less per gross acre. Low density development is generally difficult to serve with public transit due to its inherent dispersed trip ends and long walking distances to bus stops. The DEIR should discuss the relationship between the City's proposed land use policies and the ability of public transit to serve transportation needs in the area.

We appreciate the opportunity to review the Proposed Vacaville General Plan and DEIR.

Very truly yours,



Keith Mattson
Environmental Review Officer

KM:rbp
6849p-85

cc: Commissioner Sperring
S. Germain, ABAG
H. Hilken, BAAQMD
W. Greene, Caltrans Dist. 4

Response to Metropolitan Transportation Commission

1. Comment noted.
2. The attached table shows the existing 1990 freeway volumes at selected locations with that portion of through trips increased to 2010 volumes.

A parallel route system is being investigated as part of the Lagoon Valley EIR. However, pending the outcome of the termination of Nelson Road, parallel routes in this area are limited, primarily because of topography limitations.

	Existing Volume	2010 Volume ^a
<hr/>		
Interstate 80		
w/o Lagoon Valley	9,900	10,700
Lagoon Valley to Alamo	10,000	10,800
Alamo to Davis	8,400	9,200
Davis to Elmira	8,400	9,200
Elmira to I-505	8,200	8,900
East of I-505	7,000	7,800

^aAssumes no development in the City of Vacaville.

3. The Plan states that the local transportation system will be evaluated for expansion when development occurs. (See Policy 6.4-G11.) Even though a significant amount of existing and planned residential growth is at densities of less than five units per acre, the local bus transit system serves these areas. The commentor indicated that public transit will be depended upon for a TSM program. The General Plan requires a TSM Ordinance to be adopted and implemented; however, no decisions have been made as to what type of TSM programs will best serve Vacaville's needs. Carpooling and vanpools are very likely components to a strong TSM program. The TSM Ordinance will be developed with the input of local employers and is intended to include several options to obtain the individual employer's goal.

DEPARTMENT OF TRANSPORTATION

P.O. BOX 2048 (1976 E. CHARTER WAY)
STOCKTON, CA 95201
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(209) 948-3870



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10-Sol-I-80, I-505-Var. PM
City of Vacaville General Plan
Draft EIR

CITY OF VACAVILLE
PLANNING DIVISION

Ms. Maureen Traut
Senior Planner
City of Vacaville
650 Merchant Street
Vacaville, CA 95688

Dear Ms. Traut:

We have reviewed the Draft Environmental Impact Report for Vacaville's Proposed General Plan and offer the following comments:

ATSD COMMENTS:

1. Caltrans' Route Concept Report (RCR) for I-505 does not indicate widening north of Vaca Valley to 6 lanes. Concept is for a 4-lane freeway for the next 20 years.
2. A 30% reduction as a result of implementing a TSM ordinance seems optimistic as does a 2% reduction for home-other and non-home based trips. The City may want to model a "worst case scenario" to indicate what the level of congestion would be if those goals were not reached.
3. We would like to see traffic volumes for Midway Road east of Eubanks near the Midway/I-505 interchange. With potential industrial development south of Midway and east of Eubanks, traffic could be significant on Midway. Draft EIR shows volumes for Midway, west of Eubanks but not east of Eubanks. Commuters may use Midway to access I-505 if Vaca Valley is congested.
4. The City may want to consider improving Pena Adobe as well as Cherry Glen. Figure 6 shows that Pena Adobe could have 1600 cars (or more) in P.M. peak hour utilizing that interchange.

Thank you for the opportunity to comment on the Draft EIR. If you have any questions, please contact me at the above noted telephone number.

Sincerely,

PATRICIA MICKELSON
Associate Transportation Planner

Response to California Department of Transportation

1. Comment noted.
2. The 30-percent reduction in traffic resulting from TSM measures was based on analysis of other existing City TSM programs (i.e., Roseville, Pleasanton, Sacramento). In addition, TJKM has added an analysis to its *General Plan Transportation Study* (included as an attachment to this Addendum) which analyzes buildout of the Proposed General Plan without a TSM program.
3. Counts for the peak hour are 500 west of Eubanks and 630 east of Eubanks; the revised *General Plan Transportation Study*, prepared by TJKM, includes this information.
4. As part of the Lower Lagoon Valley policy plan environmental review process, the impacts on and appropriate mitigation for this interchange are being analyzed in detail.

Other cities have TSM programs with trip reduction goals as high as 45 percent and as low as 15 percent. The City believes that a 30 percent goal is conservative and very realistic based on what other cities with similar business park land uses have achieved. (Many employers in Pleasanton have met or exceeded their 45 percent reduction goal.) Vacaville is committed to implementing a TSM program and will be hiring a TSM coordinator to work with employers on individual TSM programs.

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CITY OF VACAVILLE
PLANNING DIVISION

General Plan EIR, May 1990
SCH # 89022819

City of Vacaville
650 Merchant Street
Vacaville, CA 95688

Attention: Mr. John Thompson
City Manager

Gentlemen:

The General Plan, including its EIR, is the land use constitution for the city. A clear pathway of general plan implementation is desirable. This pathway should be recognizable by all, as the implementation journey begins and continues. It is my hope that in addressing these issues now the City will be able to avoid future problems. This is the intended spirit of the content of this letter: an objective overview, with detailed comments.

As an overview, I find that:

- Many studies are recommended. Because there are so many, I doubt that resources are available to conduct these studies in a reasonable time framework.
- Considerable potential exists for increasing developer fees and exactions. While individually none of these may be troublesome, all of them together would likely destroy the economics of almost any development in Vacaville.
- Final resolutions of significant problems are deferred to policy plans which will become an awkward public process because most will involve a multitude of property owners.
- The EIR, having the same author as other general plan documentation, reads too much like a public affairs discussion with impacts generally downplayed. Alternative solutions for water supply, traffic, drainage, etc. are rarely mentioned, much less analyzed.
- The potential roles of public agencies are downplayed or ignored, such as the Redevelopment Agency, LAFCo, neighboring cities, the County and Regional Air and Water boards.

Specializing in Commercial and Industrial Properties

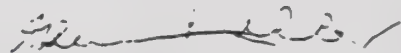
- Availability of gas and electricity, by sector, is not mentioned.

It would seem logical that the City Manager request factual reports concerning the above, so that the EIR may be completed and the City Council establish policies at this time to avoid confusion and delay of General Plan implementation. For example, what will be the schedule of studies, who will pay, and will development be deferred while studies are being completed?

Secondly, I would recommend that the City Manager deal with all items in the attached marked as "Problems." Note that depending upon the answers to some questions, additional items may also become problems. The City Manager should make a report to the City Council concerning all "problem" areas, so that the Council may take appropriate actions, or state clarifications of policy, simultaneously with the adoption of the General Plan and the EIR.

It is recognized that this letter, with its attachment, is not complete, and, in some cases, undoubtedly reached conclusions or deals with items beyond the appropriate scope of a general plan EIR. However, caution was taken in an attempt to stay on track: an objective overview, with suggestions for improvement.

Sincerely,



Glenn Miller

Enclosure

PROPOSED VACAVILLE GENERAL PLAN

VOLUME THREE:

DRAFT ENVIRONMENTAL IMPACT REPORT: May, 1990

	P a g e #	C o m m e n t	Q u e s t i o n	P r o b l e m
1. CEQA says EIR is to measure against existing General Plan (GP) and existing conditions.	11	X		
2. North of Kilkenny should be part of of Northeast, not East, since Freeway is more of a connector of these areas rather than a separator.	Fig. 1	X		
3. Regional Map should focus on Solano and Yolo Counties, because these areas will have increasing impact on Vacaville Planning Area (VPA). Note that EIR does not discuss impacts on VPA of massive residential growth in Rio Vista, Dixon, Winters, and east of Travis AFB.	Fig. 2	X		X
4. What is the status and basis of the County's proposed Corridor Design Plan? What land use assumptions and community separator criteria will be evaluated?	12		X	
5. Should the city have acted on the Interim Air Quality Plan? How may this affect the GP?	13		X	
6. GP has 2 planning horizons: 1995 and 2010	15	X		
7. The EIR does not evaluate the 1995 horizon; it only evaluates the GP in a completed condition.		X		X
8. What if ABAG is correct in projections of ratio of employed residents: jobs? Shouldn't this be evaluated as it might affect the GP, including traffic, drainage, etc.?	17		X	
9. When will the Plan Growth Ordinance and phasing plan be implemented?	19		X	
10. The "project" is full development of proposed GP.	21	X		
11. • what happened to the 1995 planning horizon of the GP?			X	X
12. • mitigation measures are to be "built in," not "added on,"	21	X		
13. • and, are not already included in the GP	22	X		
14. Why is it necessary (or only somewhat desirable?) to have a "green belt buffer between urban and agricultural uses"? Doesn't agriculture qualify as a community separator?	22		X	
15. Should the EIR comment on the economic stratification within the community (i.e., the 2 golf courses in one end of town, and affordable housing elsewhere; probably restricted to mobile homes) proposed by the GP, and mitigation plans to integrate affordable housing throughout the community? Is the amount of affordable housing that is proposed sufficient?	23		X	X

	P a g e #	C o m m e n t	Q u e s t i o n	P r o b l e m
16. When should 4 upstream detention reservoirs on Alamo Creek be constructed? Who will pay?	24		X	
17. Roadway improvements are proposed; i.e., Vaca Valley Parkway and Akerly easterly and California Drive extensions	26	X		
18. • When should these be built? Who will pay?	26		X	
19. • Objective is to have "a core street system with loops around the city." The EIR traffic maps (TJKM) show no apparent loops or core system that ties together. Alternative solutions should be established, and mitigations offering different primary routing recommended.	26	X		X
20. Why does a four-lane arterial (N. Alamo Drive) dead end when its extension could improve the City's Loop System?	26		X	
21. Why doesn't the alternatives consider using existing railroad right-of-ways for new roads.	26		X	
22. Does Table 4.1-A also include additional traffic from neighboring communities? Is there any indication that Caltrans will supply the "projected lane needs"? If not, what mitigation is recommended?	27		X	
23. • What is the likelihood of implementation of the National Strategic Planning Study?	29		X	
24. When will the Citywide Transportation Study be updated?; and, may development be deferred until the study is completed?	29		X	
25. • The EIR seems satisfied to only report the current plan, and does not offer alternatives or significant mitigation. Also, phasing of improvements is not discussed or evaluated.				X
26. • 3 special study areas are identified. When will these studies by undertaken? Is development likely to be deferred until results are complete? The EIR should not isolate these 3 areas, since improvements elsewhere may reduce traffic in these 3 areas.	Fig. 4	X	X	X
27. Airport is revising its master plan. Why, when capacity is 250,000 operations per year and 1989 operations were only 15,600? Can Master Plan update affect land use? May development in the area be deferred until the master plan is revised? Continuing review of development proposals is suggested by the GP. I thought firm criteria was established in 1988 after considerable discussion.	33	X	X	
28. Assuming Yolo-Solano is part of the Sacramento AQMA ozone problem, will regulations restricting automobile use become a TSM in addition to those TSM's anticipated in the EIR? If so, are certain roads over-designed?	35		X	

		P a g e #	C o m m e n t	Q u e s t i o n	P r o b l e m
29.	• Vehicle miles traveled, according to the GP, will increase 350%. Sacramento AQMA may be able to restrict automobile dependent solutions that are part of any development plan, as federal and state laws are implemented.	37	X		
30.	TSM air quality mitigation discussion should also evaluate such additional items as stationery source controls, limitation of the number of airplanes, and utilization of rail.	40	X		
31.	Visual quality is an objective, meaning, in part, that the visual experience is "interesting enough to encourage drivers to leave the freeways and visit the City's shops, parks and stores." The EIR should acknowledge that this means quality of architecture and signing, landscaping, visibility and accessibility. The EIR only reports the GP's land use. How would the EIR mitigate the mostly plain and hidden (except in the Not Tree area), and often ugly nature of buildings along the I-80 corridor?	41	X	X	X
32.	• Per capita sales tax revenues must be improved if the city is to respond to mitigations and improvements needed for Parks and Recreation, Police, Fire, Storm, Drainage, etc.		X		X
33.	Is a 500' transition zone the same as a community separator? The EIR should use the same language when evaluating the same standard at different locations. "55 mph, less than 5 minutes"; is this good or bad?	42	X	X	
34.	The EIR defers to Policy Plans the practicality of GP "design and infrastructure requirements" and EIR mitigations. This is beyond the role intended for Policy Plans, which are not designed to address improvements outside of the planning area to which the Policy Plan speaks. This role belongs with the GP and its EIR chiefly; otherwise, how, for example, will comprehensive drainage and traffic solutions be derived? If not addressed in the GP, could these major issues (also including affordable housing and city parks) remain in limbo, without substance for solutions partly because the EIR offers too few mitigations?	43	X		X
35.	Why is "the City's east side" uniquely selected for a 1,500 foot transition zone; other areas are suggested for a one or two mile separator, while some will wait for the Policy Plan(s)? The EIR should evaluate these differences, and suggest mitigations.	43	X	X	
36.	The assumption for future school enrollment projections remain unchanged from traditional rates, 0.7 per dwelling unit.	45	X		
37.	California Dept. of Education requires that "at least 30% of total capacity" is to be "in portable classrooms".	48	X		
38.	How can the city require permanent school facilities with separate parks, as a practical matter? Builders fees are capped by state law (AB2926, as amended), this requirement conflicts with #40 above, and the schools must rely upon Leroy Greene Bond Funds for new construction and rehabilitation of older schools, or pass bonds requiring a 2/3 vote.	49	X	X	

	P a g e #	C o m m e n t	Q u e s t i o n	P r o b l e m
39. The EIR should suggest an adjustment of school district boundaries, or unification of districts, as a mitigation.	49	X		
40. The notion that city parks and school play yards should be separate neglects entirely a discussion of the school districts ability to pay the cost of supervision of activities, maintenance and facilities. Joint school-city use of facilities and parks (which could double as school play yards during the school day; i.e. city of Hercules and Richmond Unified School District) provides enhanced services when tax dollars are constrained.	50	X		
41. Are residential neighborhoods sized sufficiently for desired school size (Page 49)? Or, will this criteria establish a minimum size for residential neighborhoods and Policy Plan areas?	53	X		
42. The EIR's Chapter 4.5 - Schools yield no indication that the plans and programs of the school districts have been considered. The EIR should reflect district's future plans, and offer mitigation, if there is conflict with the GP.		X		
43. If the County is to maintain Lagoon Valley Regional Park (page 55), do they have anything to say about adjustment and reduction of park boundaries?	59		X	
44. It is stated that Lagoon Valley Regional Park will "lose importance and function as a regional facility and increasingly gain importance as a City of Vacaville park." How can both trends be simultaneously true? Is the City proposing to take over responsibility for the park?	59		X	
45. • What will the 400 foot open space corridor achieve? It is from where to where? Will it be used for recreation?	61		X	
46. • What possible means of "minimizing urban pollutants" to Lake Lagoon can the Policy Plan suggest? At what cost? How effective?	61		X	
47. When will the proposed Parks and Recreation Facilities Master Plan (PRFMP) be done? What specific items of mitigation, does the EIR suggest concerning the GP that may be used as guidance for the PRFMP?	62		X	
48. The high volume water wells serving American Homes Food and Lucky Stores should be included in discussion. Note that this private system is readily assessable for connection to the city system.	63	X		
49. What is "public use"? Is there any use for which Solano Irrigation District water cannot be used? Would the District retail directly to customers, or only sell to the city?	64		X	
50. Improvements will be needed to increase water delivery from 90,000 to 110,000 people. How are the G.P.'s industrial and commercial user demands factored? What is the impact of the water rights assessments (water delivery contracts that are already assured to customers, mostly industrial)? The detail of these water rights should be included in the EIR, together with mitigations.	66	X	X	

	P a g e #	C o m m e n t	Q u e s t i o n	P r o b l e m
51. Of Sectors 8 and 9, what if only one sector is developed? Or, only parts of both? Are the reservoirs needed before construction is started in order to provide appropriate levels of safety? Who will pay for the reservoirs and related infrastructure? The EIR should discuss. See phasing, page 69, . . . "installed" . . . "before development."	67	X	X	
52. "Substantial" . . . "pipeline improvements" are "needed" with major water transmission lines of 12 inches or greater stated. The EIR should discuss alternatives, financing and timing to determine if the GP can be implemented.	68	X		
53. • To loop the dead end line to Roberts Mobile Homes, and to service water rights assessment contracts, the "new pipeline on Leisure Town Road from Elmira Road" should be along Lewis Road or Byrne Road, and then "to I-80 and into Sector 5."	69	X		
54. Guidelines and contingency planning should be reported and evaluated in the EIR "in response to unanticipated development," with mitigations suggested.	69	X		
55. Reservoirs located where?	71		X	
56. Where will major water transmission lines (after 1995) be located: Nut Tree Road/I-505, and Leisure Town Road/Midway Road? Any connections to American Home Foods - Lucky Store delivery system?	72		X	
57. Where will major water transmission lines (after 1995) be located: Unnamed Future Road, Midway Road and Akerly Drive? Why is nothing shown for Sector 5, where development is proposed and water rights assessments exist?	73		X	
58. If a major water user such as Toshiba is located, what will be the impacts and mitigation?	74		X	
59. Will SID guarantee water quality and continuous delivery as well as an appropriate annual delivery? If not, what are impacts and mitigations?	74		X	
60. The GP requires that the Water Master Plan be updated. The EIR should suggest guidelines and mitigations such as alternative solutions. Is an additional update anticipated beyond that recently approved by the City Council?	74	X	X	
61. Was the 1987 Vacaville Trunk Sewer Study ever adopted by the City Council, or is it only used by staff as an information document?	74		X	
62. The EIR should include discussion of primary collector lines nearing or at capacity where additional development will cause an over-capacity situation; i.e. Leisure Town Road south of I-80.	75	X		X
63. As in the case of water, the EIR gives no clue as to whether industrial and commercial growth is factored into allowable development while the treatment plant grows from 10 to 12 mgd. This should be corrected.	75	X		

	P a g e #	C o m m e n t	Q u e s t i o n	P r o b l e m
64. When will the city be "conducting" its analysis of "plant effluent impacts on downstream water quality"? Will development be deferred?	76		X	
65. How about development in the East Sector, together with the Northeast sector, as impacting capacity of wastewater levels?	76		X	
66. What EIR (2/88) studied expansion of the Easterly Wastewater Treatment Plant? Is this the Leisure Town Road plant, and is the notation that "the impacts attributable to this project are comparable to those associated with the plant expansion" a comparison with expanding the Elmira plant? If so, how do these impacts compare and is mitigation identical?	77		X	
67. A Sewer Master Plan Update will be conducted between the summers of 1990 and 1991. Will this Update be the subject of a separate EIR, or is this EIR sufficient? Will development be deferred until the City Council affirms the update?	77		X	
68. • Is there a map showing "existing service areas"? If so, it should be included in the EIR, at least by reference.	77	X	X	
69. • "No development is to occur outside the existing service area until adequate public services can be assured, and the City is committed to establishing a monitoring program" Is the city staff permitted a more casual approach for areas within service areas, without identifying impacts? What is an appropriate "monitoring program"?	77	X	X	
70. Why is there extensive discussion of water delivery to the West Valley in the EIR, but nothing of the sewerage system?	77		X	
71. "The City should implement policies to ensure that funding is in place and facilities, including fire stations, are constructed in a timely fashion to serve new development." Is there any difference in purported policies between fire, and water, sewer, drainage and transportation?	82	X	X	
72. "If adequate funding will not otherwise be assured" will the Mello-Roos or other funding mechanism become the developer's responsibility? Will the city require a voter-approved Mello-Roos before approving development? This problem could be similar to the school requirement in the EIR, either requiring exorbitant (and possibly illegal because each fire station should serve areas much larger than a single development) builders fees or a two-thirds vote (unlikely). Will development be deferred? The city should have a more specific, area by area program for fire protection (as is true for water, etc.), with alternatives, and the EIR should evaluate impacts and establish mitigation.	82	X	X	X
73. • "The GP states the City's intent to develop a Public Safety Facilities plan to ensure adequate service to the Planning Area". When will this plan be done? Will development be deferred? Is there a definition for "adequate service," as there is for roadways?	83	X	X	

		P a g e #	C o m m e n t	Q u e s t i o n	P r o c e e d i n g
74.	What is the rationale for the Vacaville Planning Area being different from the sphere of influence? Does not LAFCo have the primary responsibility for establishing urban service limits (in connection with the city's Comprehensive Annexation Plan) and "effective visual community separators"? Has LAFCo been contacted regarding changes to their objectives? The EIR should acknowledge the roles to the County, LAFCo, other cities, and the content of Vacaville's current annexation policy, as the GP is evaluated. East of Leisure Town Road is not continuously "offering rural views". The reference to the Comprehensive Annexation Plan on pages 91 and 92 seems to void its impact.	85	X	X	
75.	<ul style="list-style-type: none"> How can the EIR make a conclusive statement, without supporting evidence, that "the ridge near the North Texas Street exit into Fairfield and the Lagoon Valley development of Vacaville will be the remaining break between the two cities..." Is this an adequate Community Separator? 	94		X	
76.	<ul style="list-style-type: none"> Similarly, east of Leisure Town Road beyond the 1,500-foot greenbelt (what land use would this be, and exactly where would it be located?) would remain primarily in agricultural uses. Does this mean the entire length of Leisure Town Road? What are the future policies of Dixon? 	95		X	
77.	Where a high per cent of Prime Farmland is shown to be developed, 90% or more, why does the EIR not discuss alternative locations for development?	96		X	
78.	<ul style="list-style-type: none"> Is the "definite geographic limit" established after too much prime farmland is already taken? The EIR should discuss this. 	97	X	X	
79.	<ul style="list-style-type: none"> Will the city be willing to implement such things as "transfer of development rights, purchase of development rights or conservation easements, and farmland trusts; a Right-to-Farm Ordinance"? What would the cost be to make a significant impact? 	97		X	
80.	No major earthquake fault lines occur in the VPA. Extrapolation from seismic intensity distribution maps for the Hayward and San Andreas Faults (California Division of Mines & Geology) show minimal shaking in Vacaville. To the extent that any liquification potential exists in Vacaville it will be addressed in the soils report for each development.	98	X		
81.	The earthquake and soil hazards discussion seems unnecessarily long. Why doesn't the EIR simply say that no area within Vacaville is subject to the Alquist-Priolo Act? Each development must do its own soils testing.	98	X	X	
82.	Area 2 discussion stops in mid-sentence.	99	X	X	

	P a g e #	C o m m e n t	Q u e s t i o n	P r o b l e m
83. The GP proposes the elimination of existing ponding and overflow areas. Why, if no damage is done? Spending money on increasing creek flow could be lessened, and the natural environment better preserved. There is no reason that a portion of peak flows should not be briefly accommodated in large parking lots, for example. The EIR should evaluate this option.	107	X		
84. Who pays for "proposed upstream reservoirs"? When will they be installed; that is, at what stage of development?	107		X	
85. The EIR leaves the impression that Horse Creek and Gibson Canyon Creek will not require improvements. Does the Solano Water Agency agree that these creeks "have excess capacity in the downstream improved channels?" If yes, why then must Chevron's improvement plans for Horse Creek south of I-80 not increase flow above historical levels? Is the EIR incomplete? Note that I-80 and I-505 restrict the flow and hydraulics of each creek, by acting as a dam.	107	X	X	
85. Will design flows accommodate a 10 year or 100 year storm? The EIR does not say which; neither does it state the impacts of each. Design flows, costs and impacts will vary at a considerable rate. The city and developers may not be able to afford retaining 100 year storms in upstream reservoirs or channels, which are difficult and expensive, if not impossible, to accomplish in an environmentally sensitive design. Overflow ponding may be desirable/necessary. What is the criteria and status for the "would-be policy to require on-site detention."	110	X	X	X
86. Without specific design, how can it be stated that "post-development 10-year and 100-year peak flows (in particular 100 year) would be reduced to 90 percent of predevelopment levels"? Will this be a design criteria?	110		X	
87. Are there standards for erosion control to reduce impacts?	111		X	
88. Department of Fish and Game has "direct jurisdiction over any activities that would substantially divert or obstruct the natural flow or substantially change the bed, channel. or bank of any stream." While the discussion of this issue appears complete, why is there no similar discussion of governmental control over wetlands or the Regional Water Board control over ground water quality?	116		X	
89. A Creekside Policy Plan has been adopted for Alamo and Ulatis Creeks. Does the Policy assume a 10 year, or a 100 year design? Will other creeks also receive a policy plan? Should they? At what stage of development will the Policy be implemented? Who pays?	117	X	X	
90. Of mitigation measures, suggested, how much will the developer pay?	119		X	
91. What is the definition of "Development Area"?	127		X	
92. "Five alternatives to the proposed Plan are considered in this section." Does this mean alternatives to be evaluated along with the plan (i.e., "proposed Plan") adopted by the General Plan committee?	133	X	X	

	P a g e #	C o m m e n t	Q u e s t i o n	P r o b l e m
93. "The mix of components in each Plan was selected to test differences in terms of traffic, housing demand and mix, and environmental impact." Does this factor in the regional consideration that most new and affordable housing to be built both inside and outside the VPA will be more accessible to the east side of Vacaville, thereby providing less peak hour demand to local streets and I-80 through Vacaville to east side jobs?	133	X	X	
94. "The average annual population growth rate would be 1.62 per cent and the average growth rate for new housing would be 2.34 per cent." Even through this is projecting the 1980 GP forward from 1989, both of these percentage growth projections cannot reasonably be expected to be simultaneously true, and the EIR should note this. Students per household remain at 0.7.	135	X		
95. The "Proposed Plan" is mentioned, without reference, for the first time. Is it the staff recommendation, or, the recommendation of the committee? A definition of the "Proposed Plan" should be included in the Glossary.	136	X	X	
96. "All interchanges between Alamo Drive to Leisure Town on I-80 and the Vaca Valley Road/I-505 interchange are projected to require major improvements" Does this suggest that the EIR, as an alternative, should recommend that land uses and road ways be designed so as to maximize the use of other interchanges within Vacaville's sphere of influence?	139	X	X	
97. Is the reason for expanding the limits of the VPA to be able to state that "more open space would be preserved under the proposed Plan than under the existing General Plan"? This statement assumes that the additional land taken by the expanded VPA would have been developed under policies of the 1980 GP, or other then-existing governmental policies.	148	X	X	

Appendix 3

98.	The City may "fully develop within its planned municipal limits so that premature development of agricultural lands is avoided." Will the city contract with the Solano Irrigation District (SID) to limit the area of development, thereby limiting its ability to amend its GP? Is is legal, or desirable public policy, to limit future city councils in this way?	2	X	X
99.	The City would agree to "growth limits." Will these growth limits ever terminate.	3	X	X
100.	The SID agreement is to "be executed concurrently with the General Plan adoption"	5	X	
101.	The agreement will establish "ultimate urban limits on the south, and long term limits on the east, west and north." How long is "long term"?	6	X	X
102.	The city will "plan for and provide a buffer area on its northern and eastern limits." Will this "buffer area" always connect, or may it be disconnected at specific locations?	7	X	X
103.	". . . . to develop the City within the urban service limits, planning and limiting the oversizing of utilities"	7	X	
104.	"the availability of water plays a major role in determining the location, intensity and timing of future development." Who determines "availability", the city, SID, or both? If West Valleys are not developed will SID Agreement water be available for development in other sectors of Vacaville, including areas east of Leisure Town Road?	8	X	X
105.	"it is the further purpose of this Agreement to provide a long term water supply including satisfying its regional fair share of housing"	9	X	
106.	"District recognizes the necessity of providing high quality water in adequate quantities to the City's present and future water users." "High quality" should be defined (i.e., suspended solids). Will the provision be for a continuous supply, or will the supply be interrupted for canal maintenance, etc.? Will agriculture have priority over city users?	12	X	X
107.	How is it that the "City will incur costs resulting from urbanization which occurs in the unincorporated areas of the County within or adjacent to City's planning area boundaries"? Which jurisdiction will plan this "urbanization"? Will lands be de-annexed from the S.I.D.?	12		X

Appendix 11

108.	How were the "external cordon station distribution pattern" percentages and numbers established? The percentages, in particular, appear arbitrary. Significant development will occur, mostly residential, which will affect these numbers in the near future, well in excess of a linear extrapolation of historic experience. Are the impacts of large developments in Rio Vista, Dixon, Winters, etc., plus an upgraded and re-routed Route 113, considered in future traffic projections?	Fig. 3	X	X
109.	Why is 90% figure in Table V different from the 60% Residential: Home-Work, Internal-Internal figure in Table IV, page 11? Shouldn't they be the same? It would appear that other percentages in Table V should agree with Table IV.	12		X
110.	" trips were assigned to each external cordon based on its accessibility to residential, industrial and commercial land uses." Is quantity of development, both internal and external, a factor together with accessibility? How does this affect traffic on local streets, particularly as attractions (i.e., jobs) are increasing in Vacaville and large residential development is occurring in Rio Vista, Winters, and Fairfield east of Travis Air Force Base?	12	X	X
111.	<ul style="list-style-type: none"> • "the future conditions model used trip generation rates and trip distribution patterns developed in the calibration model and projected land uses in the study area." Is the study area the same as the VPA? Again, what about external influences? 	14	X	X
112.	Will "crosswalks at major intersections" affect LOS calculations? Will the design of the intersection be affected because of longer green lights necessitated by crosswalks? An example would be greater left turn, or right turn, stacking capacity.	15		X
113.	Three types of TSM measures are recommended. How large an area (section?) should be taken as a unit for logical TSM determination? If the third measure (street closures, intersection modifications, traffic signals) is implemented, who will decide and who will pay? Will development be deferred while studies are undertaken?	15	X	X
114.	Table VII is excellent in that it tabulates both existing and projected land uses, by dwelling units, acreage, or student count. It has applicability in impact determination for many other subjects other than traffic. One question: is the full acreage of American Home Foods (100 acres) and Lucky Stores (125 acres) included? Note that many large companies buy excess land, but seldom get around to using it. Even Alza has 16 acres. This consideration should reduce traffic projections.	17	X	X

	P a g e #	C o m m e n t	Q u e s t i o n	P r o b l e m
115. The map illustrates the difficulty of traveling from one part of Vacaville to another, in most locations. Heavy reliance upon I-80 is also illustrated, for local traffic. When 6 lane (or more) arterials meet at an I-80 interchange (Vaca-Valley Parkway and Leisure Town Road), then intersection/interchange design becomes most unreasonable, even at LOS D. Why wasn't the improvement of perimeter roads considered (i.e., Midway, Lewis, south of Fry) where right of way could be acquired reasonably, access could be controlled and construction would be much less disruptive? In other words, a rim road which would seem to work well with the "spokes" of existing city streets. Some new roads are established and other roads extended. It is not clear whether other options were considered.	Fig. 5	X	X	X
116. The LOS C standard was adopted "due to the long-range planning nature of this analysis." Presumably, this means that "future growth beyond the levels assumed" may be acceptable in certain situations.	18	X		
117. If Akerly and California Drive extensions are not built, is development deferred? Must the 3 special study area studies be completed before significant development proceeds? Who will pay for needed "critical roadway segments"?	Fig. 7		X	
118. Under what conditions are driveways with left turns permitted on arterials?	21		X	
119. "The Orange Drive extension east of Leisure Town Road should be studied further; by <u>not</u> extending Orange Drive, the intersection will operate at a more acceptable LOS." How can this extension <u>not</u> happen? What are alternatives? When will the study be done, and who will pay for it? Will development be deferred?	21	X	X	
120. "the strength of attraction varies directly with the intensity of development of the attracting land uses and indirectly with the time-distance between the attracting land use and the residential areas External stations are established on the perimeter of the study area to deal with traffic moving into or out of the area." Does this mean that the model has considered the impacts of residential development outside the VPA; as stated by GP's of neighboring communities?	A-1	X	X	
121. Intersection detail seems to affect LOS more than number of traveled lanes, particularly if access is restricted.	A-5	X		
122. "60 per cent of the Vacaville work production trips would stay within the City."	B-4	X		
123. In Table B-IV, why are Out Bound Work trips (70%) higher than Inbound Work trips (30%) when the ratio of jobs to employed persons in Vacaville is greater than 1.0 after the GP is implemented?	B-7	X		

Response to Glenn Miller

Comments noted; the EIR responses address issues specifically related to the General Plan EIR. Comments related to General Plan policies will be considered separately.

1. Comment noted; no EIR response required.
2. No adjustment in planning sector boundaries can be made at this time.
3. We believe the Regional Map provides an appropriate overview of the City's location in the Bay Area. Growth in other cities is not specifically addressed because the General Plan EIR relies on ABAG's projections for cumulative impact analysis -- an approach specifically allowed by CEQA Guidelines (see Section 15130).
4. The County adjusted aspects of the Corridor Design Plan in 1988 as amendments to the General Plan and is implementing these policies and criteria.
5. The City is not yet required to act on the Plan by a certain date and the Plan currently is under review. Because we do not know what action the City may take, we can not speculate on the specific effect on the General Plan. No EIR response is required. (See also response to SACOG comment regarding p.37 in the conservation comments section.)
6. Comment noted; no EIR response required.
7. This approach is appropriate to portray the reasonable "worst case" effects and to examine cumulative impacts.
8. The General Plan EIR should and does examine the jobs/housing relationships that would result from buildout under the Land Use Plan, and infrastructure requirements need to be geared to the Plan's needs not the regional projections in order to meet the "internal consistency" requirement of state planning law.
9. Comment noted; no EIR response required because no date for implementation has been set in the General Plan.

10. and

11. The General Plan never had a "1995 planning horizon." The focus was always on a long-term, 20-year horizon. However, in accordance with State law, the quantified affordable housing goals in the Housing Element are based upon a five-year planning period (1990-1995). As previously noted, ABAG projections were used in preparation of this Plan and these projections include a 1995 and 2010 forecast. However, the Plan is consistently based upon a 20-year projection of buildout.

12. and

13. Comment noted; no EIR response required.
14. Agriculture certainly can qualify as a use within a community separator, but a buffer area adjacent to housing is needed to protect against pesticide spraying and other noxious farming activities which could adversely affect residents.
15. Comment noted; no EIR response required because economic and social issues are not required to be addressed in an EIR (see Section 15131 of CEQA Guidelines).
16. Reservoirs should be constructed when funding occurs, otherwise on-site detention and the additional required 10 percent flow reduction in Lagoon and West Valleys will mitigate future impacts.
17. and
18. The General Plan does not establish timing for specific projects. Funding obligations are prescribed generally in the Growth Strategy section and more specifically by Policy 9.2-11 which calls for a financing plan for upstream reservoirs and Policy 6.2-G5 which calls for a roadway system funding program. Funding for the upstream reservoirs is a major hurdle. City Staff intends to work with the Solano County Water Agency to pursue Federal grants and funding proposals to build these reservoirs.
19. Alternative roadway configurations were evaluated during the sketch plan phase of the General Plan program; the General Plan EIR includes mitigation as appropriate for significant impacts. Maps of the alternative roadway configurations are contained within the Sketch Plans report, available at the Planning Division Office.
20. The street is not shown to extend outside the urban area.
21. The link between California Drive and Davis is shown as a bike trail.

22. Traffic generated by neighboring communities is included in the traffic model through the external cordon stations. Caltrans most likely will not have the funds to provide the projected lane requirements, and even if they could, there is not land available to accommodate the projected lane requirements. As the freeway becomes more congested, several things will probably occur. Motorists will seek other routes or choose to travel at less congested times. No specific mitigation is recommended. If Caltrans cannot widen the freeway, this becomes a regional issue that Caltrans and local agencies would need to work together to find feasible alternatives.
23. The likelihood is unknown.
24. It will be updated after Plan adoption; development need not be deferred.
25. Comment noted; no EIR response is required.
26. The studies will be done in conjunction with policy plans and development proposals. The Nut Tree ALUP sets land use restrictions, and no deferral of development is required.
27. Comment noted; no EIR response required.
28. Whether additional TSM will be required is not known at this time because an air quality model is not available. A 30-percent peak-hour diversion may be sufficient or it may not. The General Plan Policy 8.3-G2 anticipates cooperation with regional agencies. (For further explanation, see response to SACOG comment regarding p.37 under Conservation.)
29. Comment noted. (See also, the above response to comment 28.)
30. For response, see response to SACOG comment regarding p.37 under Conservation.
31. Comment noted; no EIR response required because the Plan establishes general criteria for improved landscaping and screening along entries to the City and calls for preparation of community design guidelines which will mitigate these impacts.
32. Comment noted; no EIR response required.

33. These terms have different meanings, as defined in the General Plan. The EIR uses these different terms as they are used in the Plan and does not express any value judgements. A determination of "good" or "bad" is subjective; what the EIR does is present the information for use in decision-making.
34. The General Plan defines a new role for Policy Plans and the zoning ordinance will need to be amended to conform to these new requirements. With this in mind, the EIR analysis is valid and its reliance on mitigation to be implemented through Policy Plans is well-founded.
35. Comment noted; no EIR response required because these decisions were made by the General Plan Committee as part of the policy-making process. Differences are analyzed by the EIR in the context of Plan alternatives that were considered. No further discussion is required. Separators are community buffers. The 1,500-foot area on Leisure Town is not a transition zone, but a 1,500-foot area for urban use with 500 feet of density transfer in order to create a 500-foot buffer between residential uses and agricultural uses.
36. and
37. Comment noted; no EIR response required.
38. Comment noted; no EIR response required because the comment addresses financing. However, it should be noted that the Proposed General Plan requires that a School Facilities Master Plan be prepared subsequent to adoption of the Plan, and requires the Master Plan to address financing.
39. Comment noted; no EIR response required because this subject is addressed by the General Plan.
40. Comment noted; no EIR response required.
41. Considerable time was spent locating and sizing schools to meet the standards and serve logical neighborhoods; further analysis will be undertaken in the schools master planning, and the Plan Diagram indicates that alternate locations may be approved without a Plan amendment.
42. Assumptions for this section of the EIR were reviewed by the school districts, who concur in the analysis. There are not conflicts, and the Plan proposes a joint planning effort with the districts subsequent to adoption.

43. The County must approve any adjustment in park boundaries.
44. The City is not proposing to take over operation of the park. The statement is intended to indicate simply that as more Vacaville residents live in the vicinity of the Park, they are more likely to use it, which will change the nature of use.
45. Its purpose is to "soften" the appearance of adjacent development and provide views of the lake and valley. Whether any recreational use will occur will be established in the Lower Lagoon Valley Policy Plan and reviewed as a part of an EIR for that area; the General Plan does not address this issue.
46. Comment noted; no EIR response required because this issue will be addressed in a subsequent planning document. The General Plan EIR cannot speculate about costs or effectiveness of project-specific mitigation.
47. The General Plan does not set a specific date for completion of implementation documents; however, it does prescribe what should be included (see Policy 4.6-I4). No additional mitigation to be incorporated in the Parks, Recreation and Open Space Plan is proposed beyond what is in the EIR.
48. Comment noted; no EIR response required because the City does not intend to use this water source for municipal purposes. The City has in the past and will continue to refuse acquisition or use of these wells. They do not meet City design standards.
49. Public use includes use by public agencies for public purposes, which may include irrigation of public parks, school sites and other civic use areas. The District does not want its water entitlements used for residential development. SID would sell non-potable directly to commercial and industrial development that is within their district. Potable water would be supplied by the City, either with our entitlements or SID water through the 1972 agreement.
50. Water rights are connection fees calculated on an acreage basis; i.e., so many single-family equivalent connection fees per acre. Water demands are based on historical usages, and calibrated accurate for most cases. Discussion of water rights is not relevant in the EIR.

51. Sectors 8 and 9 Zone 2 reservoirs are sized independently and both are not needed at the same time, only when the sector develops. The reservoir will be paid for by the developer(s) of each sector and needs to be operational before occupancy of the development.
52. The Proposed General Plan requires the preparation of a Water System Master Plan which will look at improvements needed throughout the planning area.
53. and 54
55. Refer to the Proposed General Plan (Volume I) Figure 9-3.
56. Both projects are listed as proposed, and timing depends on development and needs. No connection to the AHF system is contemplated.
57. The LTR/Midway Road main (Sector 4) includes Sector 5. "Unnamed" means that no roads have been determined, but mains will be needed.
58. Major user will be handled by existing 1972 agreement entitlements or new sources. The user would pay their share for transmission mains and plant capacity.
59. The City/SID agreement will guarantee continuous delivery; the water quality is not an issue with the source being Berryessa or wells.

The SID Agreement provides for either Solano Project water or groundwater to be provided to the City of Vacaville -- both of which are of high water quality. Continued delivery is implied within the agreement as there is no term or limitation on the length of time that the water will be provided by SID to the City. Reductions in provision of water from the Solano Project would be in accordance with the Master Agreement between the Bureau of Reclamation and the Solano County Water Agency. In general, the Master Agreement provides for reductions in agricultural water prior to reductions in municipal water.

60. The Water Master Plan is designed to serve the present 1980 General Plan. The updated plan will be designed to serve the new General Plan.
61. This is not adopted by the Council, but informational for sizing new pipelines.

62. The Sewer Master Plan will cover this topic.
63. Commercial and industrial growth is included in the City's calculations.
64. The effluent impacts on downstream waste quality is a constant, but secondary uses (for agriculture) of the City's effluent is being studied. Development need not be deferred while this study is in progress.
65. The plant will be enlarged as demand comes within 2 mgd of capacity, no matter what sector.
66. The Easterly WWTP Expansion EIR analyzed expansion of the Easterly WWTP. Easterly Plant is in Elmira, not the Industrial WWTP on Leisure Town Road. The Sewer Master Plan will identify the necessary expansion for the new General Plan. If the needed expansion is greater than that evaluated in the previous EIR, then a new EIR will be required to address the potential significant impacts.
67. An initial study will be prepared for the project and will determine whether additional environmental review is required under CEQA. Development need not be deferred while the study is being prepared, unless it is dependent upon its completion.
68. The Comprehensive Annexation Plan, listed in the Bibliography, contains a map, based on the 1980 General Plan, which indicates the sewer service area for the 1980 General Plan.
69. Monitoring means anticipated usage of mains cannot exceed the capacity unless new structures are built. Areas within the service area are intended to be served by the City; areas outside the service area are not intended to be served by the City.
70. Water delivery was discussed in detail in relation to the SID agreement entitlements and the new (Zone 2) reservoir system. The sewer delivery system is straightforward; however, it will be discussed in specific detail in the Sewer Master Plan and the EIR for the area.
71. There is no difference. Emphasis for fire protection only is included for clarity.

72. Comment noted; no EIR response required because this issue will be addressed on an area-by-area basis in the Public Safety Facilities Master Plan, required by Plan Policy 5.1-I6. Specifics of financing are not within the scope of a General Plan EIR.
73. The Plan does not set specific dates for completion of implementation actions. Development only will be deferred in the context of the phasing plan to be adopted as part of the Planned Growth Ordinance (see Growth Strategy section of the Plan). Service standards are to be adopted subsequent to Plan adoption; they are not defined in the Plan itself.
74. State law allows cities to set Planning Area boundaries that may be greater than the city limits and sphere of influence. The City feels that it should clearly state its intentions for this larger area which bears a geographical relationship to Vacaville. LAFCO has responsibility for setting sphere-of-influence boundaries and also is responsible for approving amendments to the Vacaville Comprehensive Annexation Plan. The EIR does acknowledge the role of LAFCO in establishing spheres and approving annexation; it also notes plans of other agencies in Section 2. The comment about the CAP on pages 91 and 92 is unclear, so what changes, if any, are warranted cannot be determined.
75. The EIR simply is describing what the General Plan Diagram shows as the geographic extent of the separator; the EIR does not conclude whether this is adequate as that is a policy decision for the City Council.
76. The location of agricultural and open space land east of Leisure Town Road is depicted on the General Plan Diagram, and the Plan defines these land uses. The City's Planning Area specifically excludes land within Dixon's sphere of influence so there is no inconsistency with Dixon's policies. The cities of Dixon and Vacaville are committed to maintaining a community separator between the two cities.
77. Alternatives for the location of development were evaluated in the sketch plans. These are presented in Section 5 of the EIR. The mitigation measures discussed on page 97 also note that a further reduction in the urban service area could preserve more agricultural land, so this option is presented for consideration. (See also further discussion on alternatives discussed in the response to SACOG comment on land use pertaining to page 61.)

78. The EIR analyzes the Plan's proposals; it does not address whether "too much prime farmland" has been taken as this involves value judgments that are beyond the scope of a General Plan EIR. The "definite geographic limit" includes the remaining large areas of non-prime agricultural land bordering the existing City limits.
79. Comment noted; no EIR response required. Whether the City is willing to consider a mitigation is not relevant; the mitigation measures are represented for consideration during final action on the Plan. They either may be incorporated into Plan policy or a statement of overriding considerations may be adopted. It should be noted that implementation tools mentioned by the commentor would be considered as part of establishing the community separators. The Proposed Plan does permit transfer of development rights in order to obtain the 500-foot-wide greenbelt buffer.
80. Comment noted; no EIR response required.
81. Comment noted; no EIR response required.
82. The text shall be corrected as follows:

...colluvium that is considered unlikely to remobilize under natural conditions.

83. The statement refers to the fact that substantial development is anticipated in the West Valleys and at other locations overflow has occurred. The EIR relies on the findings and conclusions of the Ulati Creek Watershed Study; no independent assessment of drainage and flood control alternatives was undertaken. Further, because Plan policies also require that post-development flows be reduced to 90 percent of pre-development peak flows, the option suggested is essentially incorporated into the Plan.

On Alamo, Encinosa, and Laguna creeks, the increased flows will have to be mitigated by 10 percent extra storage. This could be the use of the parking lots.

84. The Ulati Creek Watershed Study is the information that FEMA will use to update its maps. We have the information now and are using it for Lagoon and West Valleys.

The City will be requesting Federal assistance in funding these reservoirs. The first phase is to perform a cost-benefit study to determine if it is fundable. If Federal funds are not available, which is highly likely, then an alternate funding method will need to be approved. The City does have the expertise to construct flood control facilities.

85. The Solano Water Agency participated in the Ulatis Creek Watershed Study on which this EIR relies. We do not believe the EIR is incomplete. The conditions of approval described for the Chevron project are consistent with General Plan Policy 9.2-I2, so we see no conflict. In addition, Horse Creek and Gibson Canyon Creek have excess capacity, and no channel improvements are necessary since their original design flows were overestimated. Flows, however, must be kept at historical levels since the creeks are tributaries to Ulatis Creek, which has capacity problems downstream of its confluence.

SWA agrees with maintaining excess capacity in those creeks until they all merge into Cache Slough; that is why the on-site detention is required in Chevron/Messenger. (See also response to comment 84, above.)

85. Both the 10-year and the 100-year floods are used as design criteria; see Chapter 9, page 7 of the General Plan. Essentially, the upstream reservoirs are to provide protection for the 10-year event, while building in a flood-prone area must provide finished floor elevations above the 100-year water surface elevation and meet other criteria related to the 100-year event. These are prescribed by the National Flood Insurance Program, and the EIR does not have to evaluate the impacts of these as the General Plan proposes no change in standards related to such criteria. On-site detention is necessary in order to provide excess capacity in creeks until they all merge into Cache Slough.
86. These are intended to be design criteria to be used in evaluation of individual projects on a case-by-case basis (see Policy 9.2-I2 of the Plan). The City uses specific runoff calculations to determine the 90 percent level.
87. The Plan does not set standards for erosion control but instead calls for adoption of resource protection regulations and for guidelines for grading and subdivision design. These could include erosion control guidelines.

88. Additional agency responsibilities will be reflected in the text additions on page 117, as follows.

(at top) ...ongoing care for selected channels and creeks (Policy 8.1-I6). Finally, where development would affect wetlands, a permit from the U.S. Corps of Engineers must be obtained and mitigation will be required.

(at end of third paragraph) ...(See Policy 8.1-I5.) Discharges of waste or drainage that may affect water quality are monitored by the Regional Water Quality Control Board which administers the National Pollutant Discharge Elimination System permit program to protect surface water supplies and a separate program to protect groundwater quality.

89. The Creekside policy statements do not address the frequency of flooding to be used as a design criteria. Rather than prepare separate policy plans for each creek or for creek segments, the General Plan envisions creekside planning would be addressed as part of the Master Plan for Parks, Recreation and Urban Open Space. In addition, resource protection regulations would address standards for creek and riparian corridors. As noted before, the General Plan does not set a schedule for implementation, and funding considerations are not EIR issues.
90. In general, developers would be obligated for the full cost of mitigation unless others benefited; however, the effect of such cost-sharing arrangements are not known at this time.
91. "Development Area" is the area proposed for development which was analyzed in the Ulatis Creek Development Area EIR, which is included in the Bibliography.
92. Yes. (See also further discussion on alternatives discussed in the response to SACOG comment on Land Use pertaining to p. 61.)
93. The Plan alternatives show different directions of growth and, in that sense, they allow regional considerations to be recognized. (See also further discussion on alternatives discussed in the response to SACOG comment on Land Use pertaining to p. 61.)

94. The point is that household size is anticipated to decline, so there will be proportionally more new households than new people. This, in turn, results in two different growth rates. The student yield was fixed as 0.7 in response to a specific request from the school districts to use this factor for long-range planning purposes.
95. The Proposed Plan is the title of the document that is the subject of this EIR. It is based upon the consensus of the General Plan Committee. The Proposed Plan is contained and defined within Volumes One and Two of the Proposed General Plan.
96. We do not see the need to make this alternative recommendation. The Plan is internally consistent, with roadway improvements correlated with land use. There is no need to design an alternative that would use other interchanges when these are centrally located.
97. The decision on how large a planning area to use was made by the City Council, consistent with state planning law which allows the city to designate any area outside its boundaries which "bears relation to its planning" (Gov. Code Sec. 65300). The City concluded that expanding its Planning Area was necessary to clearly indicate the City's long-term intentions for the larger geographic area.
98. The City will contract with the Solano Irrigation District to limit the area of development during the period of the proposed General Plan which is 20 years. Such a limitation is authorized under California law in order to receive necessary public resources such as water. Without the SID Agreement, the City would not be able to develop in accordance with the proposed General Plan as the existing water entitlements of the City would support a population of about 90,000.
99. The growth limitations imposed upon the City under the SID Agreement would terminate after 10 years in the area to the north of the "West Valleys North" area and after 20 years for the remainder of the proposed General Plan. The agreement contemplates a joint study by SID, the City, and property owners to evaluate the limitations on the east side of Leisure Town Road and includes a study of financing mechanisms which could be used to acquire development rights in order to preserve productive agricultural lands.

100. The statement is made to indicate that the SID Agreement would be viewed as part of the implementation of the proposed General Plan. Execution of the agreement either before or after the approval of the General Plan appears appropriate so long as the implementation of the various General Plan policies, including the SID Agreement, occurs within a reasonable period of time.
101. The proposed agreement limits development for the 20-year life of the proposed General Plan.
102. The buffer area need not always connect and will be developed through various mechanisms including the sizing of utilities, natural boundaries, and other mechanisms, including, for example, the SID Agreement.
103. No response required.
104. The SID Agreement identifies certain areas within which additional water may be utilized. That water may also be redirected to other designated areas within the City. Availability is determined within the confines of the Agreement. It provides for about 5,000-acre-feet of water for residential use and about 3,800-acre-feet of water for landscaping, industrial, and commercial uses. The SID Agreement should be understood in this context: the City of Vacaville presently has a limited amount of water rights and entitlements from ground water, the Solano Project, and the North Bay Aqueduct. Unless additional water sources are found, the City cannot develop in accordance with the proposed General Plan. The Solano Irrigation District has agreed to supply additional water in exchange for certain land limitations during the 20-year life of the General Plan. In addition, both the District and the City agree to seek out other water supplies such as the Central Valley Project. In light of the fair share housing obligations of Vacaville and the other communities within Solano County, it is likely that all cities within Solano County will be seeking additional water entitlements and looking to various mechanisms (new entitlements, conservation, and conjunctive use of water) in order to supply the water necessary to support residential, commercial and industrial growth.
105. Yes, a purpose of the Agreement is to ensure a long-term water supply which satisfies the mutual fair-share housing obligations that are imposed upon the City of Vacaville under state law.

106. High quality need not be defined other than the agreement contemplates either Solano Project water or ground water, both of which are commonly thought of as "high quality," and other supplies developed in the future, such as the Central Valley Project. Water from the Solano Project will be "interrupted" for canal maintenance just as it has been for the past 30 years. During canal maintenance, water storage within the City is sufficient to meet water needs. Further, Vacaville, the Solano Irrigation District, and the City of Fairfield are investigating the development of a reservoir near the joint water treatment plant that is being constructed by Vacaville and Fairfield. The issue of priority for Solano Project Water is contained within the Master contracts between the Bureau of Reclamation and the Solano County Water Agency. In general, those provide for priority of municipal uses.
107. Development which occurs outside the incorporated areas of the City impacts the streets, recreational facilities, police, and other public services provided by Vacaville. Those residing in the unincorporated areas do not support these costs through taxes or assessments. Solano County has the primary jurisdiction for planning in the unincorporated areas; however, they are presently limited to the 1980 General Plan designations until 1995. The SID Agreement provides for de-annexation of land from SID within the City of Vacaville where water will be supplied for residential use. The Agreement also provides for limitations on supply of water for urban uses outside the City limits, but within areas to the north and east of the City of Vacaville.
108. The external cordon station percentages were determined by taking traffic counts at each station to calculate existing percentages. These percentages were then adjusted using expected land use development patterns and expected long range circulation improvements to reflect 2010 travel patterns outside the Vacaville study area. These assumptions were reviewed by the City.
109. Unless the total trips for residential home-work trips equals the total trips for office-work trips, these percentages would not be the same. The model balances *total* trip production to *total* trip attractions, not specific trip-purpose to trip-purpose.
110. Yes, the quantity of development is a factor along with accessibility. The affect of traffic on local streets depends on the location of residential, non-commercial and commercial land uses. The City is in the process of coordinating with other Solano County cities a countywide traffic model; however, the results of such a model will not be known for some time.

111. The study area is the UPA, and external influences were considered in trip distribution and trip assignment.
112. Crosswalks and detailed design considerations are not specifically addressed. These factors do not affect the "critical movement" analysis.
113. Implementation of TSM programs will be accomplished by monitoring large employment centers. The City will decide what traffic operation mitigations are necessary. They will be financed through Major Streets and Interchanges (MS&I) fees, the creation of assessment districts and Mello Roos districts, and capital improvement programs. Developers will be required to go through the current development review process. Developments will be approved on a project-by-project basis.
114. The land use data in the traffic zones takes into account these developments.
115. A loop road was considered during the sketch plan process; however, the focus of this analysis was on improvements needed within the urban area, not perimeter roads that primarily are a County responsibility.
116. Yes, see General Plan policies 6.1-G1, 6.1-G2, and 6.1-G3 regarding acceptability of Levels of Service D, E, and F.
117. These road improvements are required to maintain an adequate LOS, and any development approval would be conditioned on completion of the improvements to accommodate future needs. The special studies are to be done before any development approvals for major projects are granted; funding will be from developers and MS&I fees.
118. This subject is reviewed when policy plans are prepared in the context of specific development proposals.
119. The extension will be reviewed in conjunction with the special studies previously noted. Development served by the extension cannot occur until after the special study is completed.
120. Yes. The external cordon station percentages were determined by taking traffic counts at each station to calculate existing percentages. These percentages were then adjusted using expected land use development patterns and expected long range circulation improvements to reflect 2010 travel patterns outside the Vacaville study area. These assumptions were reviewed by the City.

121. Intersection LOS is affected by the amount of traffic flowing through the intersection (volume) and the available roadway to accommodate that traffic (capacity). In addition, the operational efficiency of an intersection is affected by parking maneuvers, traffic mix, driveway access, and available green time. The intersections analysis method used in the General Plan study sums "critical" movements. That is why changing a line on a non-critical movement appears to have no affect on LOS.
122. Comments noted.
123. The percentages referred to do not relate to the number of employed persons in Vacaville, but pertain to the characteristics of specific trip purposes. Standard trip generation studies for particular uses show that at a typical work site (i.e., office, office park, industrial park), the number of vehicles leaving the site would be 70 percent of the total p.m. peak hour trip generation. Thirty percent would be entering.

COMMENTS RELATED TO THE
ENVIRONMENTAL IMPACT REPORT FOR GENERAL PLAN UPDATE
FOR THE CITY OF VACAVILLE

June 19, 1990

By Naida West on behalf of
Pacifico Gonzales

RECEIVED

JUN 20 1990

CITY OF VACAVILLE
PLANNING DIVISION

The California Environmental Quality Act (CEQA) is a process law that protects the public's ability to participate in the planning process, thereby affording maximum opportunity for decision makers to evaluate environmental consequences of planning actions. One provision requires that a project (in this case the Plan) be reviewed against reasonable alternatives. This provision is meaningful and comprehensible only to the extent the project or plan is clearly presented. For example, only if a development location is known can alternative locations be reviewed. The requirement to review alternatives was also recently interpreted by the courts to require that every reasonable alternative must be analyzed (Goleta et al vs Santa Barbara Board of Supervisors).

The Vacaville General Plan update fails to implement the spirit and language of CEQA as follows:

- 1) The Plan was not clearly presented to the public as an alternative during the time period allotted for public comment of alternatives,
- 2) Segments of the public were effectively precluded from public participation during the time period allotted for public comment of alternatives,
- 3) A reasonable growth alternative was omitted,
- 4) The omitted alternative would have been environmentally preferable to the Plan.
- 5) The EIR fails to adequately explain why it is environmentally preferable to urbanize the northern and western valleys than to grow along the I-80 corridor to the east.

1. Structure of Public Review Obscured Consideration of the City's Preferred Alternative.

In the case of the Vacaville General Plan update, public consideration of alternatives was scheduled prior to the present process (See pp. 21-22 of EIR). Five scenarios were considered, not including the proposed Plan. When the proposed plan was developed midway through the sketch plan process, the city did not go back to the beginning and present that option to the

public for its evaluation. In explanation the city states:

"Through the public-participation process, community priorities for the Plan became clear in the early stages of Plan preparation." (p. 22, para. 2)

We disagree with the above statement. The crucial land use decisions - to grow beyond existing city boundaries to the north and west valleys, allocate available urban water to those new areas, but to defer growth and water delivery to the east or south was not clear in the early stages of Plan preparation. This alternative was verbally presented to a tiny percentage of interested parties who attended the public meetings in November and December at the end of a nine-month hearing process.

The public was not afforded any opportunity to comment on the environmental consequences of the proposed plan until after it was more than an alternative. The words and the spirit of comments of the city attorney on May 24, 1990 and June 7, 1990 Planning Commission hearings convey the extent of the city's unwillingness to consider alternatives in the context of the present CEQA process. The attorney explained that the growth deferral provisions (of the proposed plan) relating to the east side of the city were developed in private meetings with Solano Irrigation District (SID) officials, and are the basis of a legal agreement which would be very difficult or impossible to alter. He said the draft EIR cannot be changed without changing that complex agreement, consuming more time than the city can afford, requiring further studies that cost too much, and/or requiring more city staff than exists. When it was suggested others might pay for studies, the city attorney said there was insufficient city staff to evaluate studies, even if they were produced by outside consultants. In view of these constraints, the planning commission did not alter the draft Plan.

The fact that some landowners, behind closed doors, have apparently achieved an agreement with SID affecting some of the lands in the southeast side (announced by the city attorney on June 7, 199) underscores the reluctance of the city to conduct open public consideration of alternatives as part of the CEQA process.

2. Segments of the public were effectively excluded from participation.

In the midst of a long public hearing process at the time of its Plan decisions and agreement with SID, the city had not yet scheduled input from the eastern sector. The public was notified that hearings from June through November would not include issues relevant to the east side of the city. Unless their comments related to site specific geographic areas on the agenda, people were precluded from commenting. They were told any written comments relating to the east side of the city would not be

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comments relating to the east side of the city would not be distributed. General comments, such as where the city should grow, were not entertained after the initial hearings in 1989.

This narrowing and channeling of public participation arguably influenced the resulting city decision, and it prevented portions of the public from participating in a decision vitally affecting their interests. Thus, in the presence of landowners from the north, the city committed to grow north. In the presence of landowners from the west the city committed to grow west. Lastly, in the presence of landowners from the east, the city said it had previously given away all its limited water and no further growth was possible.

3. Review of I-80 Corridor Properties Inadequate.

Had the city, at the time of its preferred option decision, begun the review of alternatives anew, the public could have reviewed and evaluated alternatives to the city's newly clarified plan. As an alternative to urbanizing properties to the west, the city could have considered consolidation of non-prime properties along the environmentally benign I-80 corridor. Such an alternative would have been in accordance with the city's historic annexation and water agreements. However, consideration of this alternative was omitted.

Early in 1989 public correspondence related to the east highway corridor may have been distributed among the Committee, however it was not considered. At that time the city decided to segment the hearing by geographic area. Therefore, no opportunity existed to present this alternative after the proposed plan was clearly presented.

The first public opportunity to discuss an east corridor alternative occurred on June 8 at 1 a.m. when the land use plan as related to the east segment was considered. At that time rational consideration was thwarted by the hour and by the fact that non-prime lands along the I-80 corridor had not been distinguished, for purposes of consideration, from prime lands east of Leisure Town Road. Further confusing the matter was the fact that the latter was subject to some kind of new legal agreement, not yet available to the public.

4. The Proposed Plan urbanizes prime agricultural lands and unique habitat.

The proposed Plan diverts discretionary urban water to areas of significant environmental and agricultural impact while "protecting" poor agricultural lands with minimal habitat from further urban growth."

Table 4.6-D on page 96 of the EIR compares planning sectors

by development of prime farmland. Northwest and west of the city from 90 - 100 percent of prime farmlands are scheduled for development. By contrast, on farmlands lower than class II on the I-80 corridor, 0% of lands are planned for development. Prime and non-prime lands are grouped in the table. Had they been distinguished, the analysis would be even clearer.

A lovely habitat area sheltered by the hillsides and enriched by runoff in the bottoms will be lost on one side of town while flat, hot lands with a tiny fraction of wildlife value will be protected against development on the other side.

Of course the lovely green valleys appeal to human beings just as they appeal to wildlife. People want to live there and to look out of their offices upon those kinds of areas. But sadly, people today come with at least four wheels, and they don't build softly on the land. Automobiles need roads and parking lots, people want flood protection and large level buildings fitted with sewer lines, and they bring dogs and cats. Each of these destroy the integrity of habitats, despite best efforts to mitigate. Wildlife will be forced to relocate to scarce alternative areas, or perish.

Human beings alone are capable of developing flat lands into interesting and beautiful areas. The failure of the proposed plan to consider alternative urban growth areas is a significant problem that should be rectified.

5. The EIR Does not Adequately Explain Why Growing North and West to Prime Farmlands and Environmentally Sensitive Areas is Preferable to Growing East Along the I-80 Corridor.

The EIR concludes that the proposed plan is environmentally preferable, and it bases the conclusion on two grounds: 1) the agreement with SID precludes further urban expansion toward the west, and 2) impacts on biotic resources will be "indirectly mitigated".

Regarding the first justification, the EIR states that converting prime agricultural land to urban use "is a significant adverse environmental impact (p. 6, para 2), but that "The Plan's proposal for an agricultural service area is intended to mitigate impacts on prime farmland by providing a definite geographic limit to urbanization." (P. 97, mid page)

Urbanization along the east I-80 corridor would involve no impacts on prime farmland, and could be planned in a manner to provide a definite geographic limit to urbanization under the Plan. These environmental benefits would arguably exceed the benefit of providing a geographic limit on the west side. Therefore the justification is inadequate.

Regarding the loss of biotic resources, the evidence does

not justify the conclusion, notwithstanding the provision of alternate open spaces elsewhere, "indirect" mitigation, and the promise of project-specific environmental review at a later date. (p. 6, para 5)

CONCLUSION AND RECOMMENDATIONS

1. The EIR should not be finalized until the Vacaville public has an opportunity to comment upon the core issues contained within the proposed plan in relation to reasonable alternatives.
2. Benefits to the city of urbanizing non-prime lands along the I-80 corridor to the east of the city and within the existing sphere of influence should be considered within the near-term. (see attached correspondence).

BILL GEYER
DAVID E. BOOHER
NAIDA S. WEST


GEYER ASSOCIATES

RECEIVED

JUN 21 1989

CITY OF VACAVILLE
PLANNING DIVISION

CONSULTING AND ADVOCACY IN CALIFORNIA GOVERNMENT—1029 K ST., SUITE 33, SACRAMENTO, CA 95814, (916) 444-9346

General Plan Committee
650 Merchant Street
Vacaville, CA 95688

Subject: EAST HIGHWAY AREA

December 8, 1989

Honorable Committee Members,

In August, when properties east of Leisure Town Road were originally scheduled, you received a letter from us requesting annexation of the Gonzales property for private recreational use. In the interim we have heard the Committee decided to allow development in the western valleys, and to preclude consideration of any properties to the east. We hope this is an over simplification - that you are open to consideration of limited annexation in the east, if beneficial to City objectives.

We trust your careful review would conclude that annexation of the Gonzales property would protect prime agricultural land, enhance the quality of life for existing residents, generate revenue, further City planning objectives, all the while not attracting more residents to the City. Please consider the following characteristics of the property:

* It is very near to I-80 at the Weber interchange, located at the intersection of two existing roads, one of which provides non-freeway linkage from the Elmira ^{area} to the Weber overpass.

* It is 22.5 acres of poor soil, non-prime land, which will never be productive agriculturally.

* On two sides it is adjacent to city properties zoned "industrial".

* It has been designated "Urban Reserve" for years.

* SID staff says they would not oppose annexation for private recreational use. If the property were annexed as such, SID would discuss the possibility of supplying non-potable water.

* According to water department maps, adjacent property is supplied by a city water line.

ATTACHMENT TO COMMENTS FROM NAIDA WEST
FOR INFORMATION. THESE ARE NOT COMMENTS TO DEIR.

The following planning objectives would be furthered by annexation of the Gonzales property:

- * Consolidate service areas in the east highway area, reducing the confusing and potentially dangerous checkerboard pattern of jurisdictions (see map),
- * Facilitate the permanent greenbelt concept by providing recreation at the far southeastern edge of the City,
- * Enhance City control over planning in the east corner,
- * Facilitate a feasible and practical "loop road" on the east side when, at a future date, it is needed.

Soon after purchase of the property, Mr. Gonzales became aware of your Update. He therefore postponed any specific request pending the unfolding of the process. We have informed your staff that we are available to work together toward a specific proposal that fits within City objectives. Our review indicates that recreational use would provide opportunity for Vacaville residents as well as visitors to the east highway area.

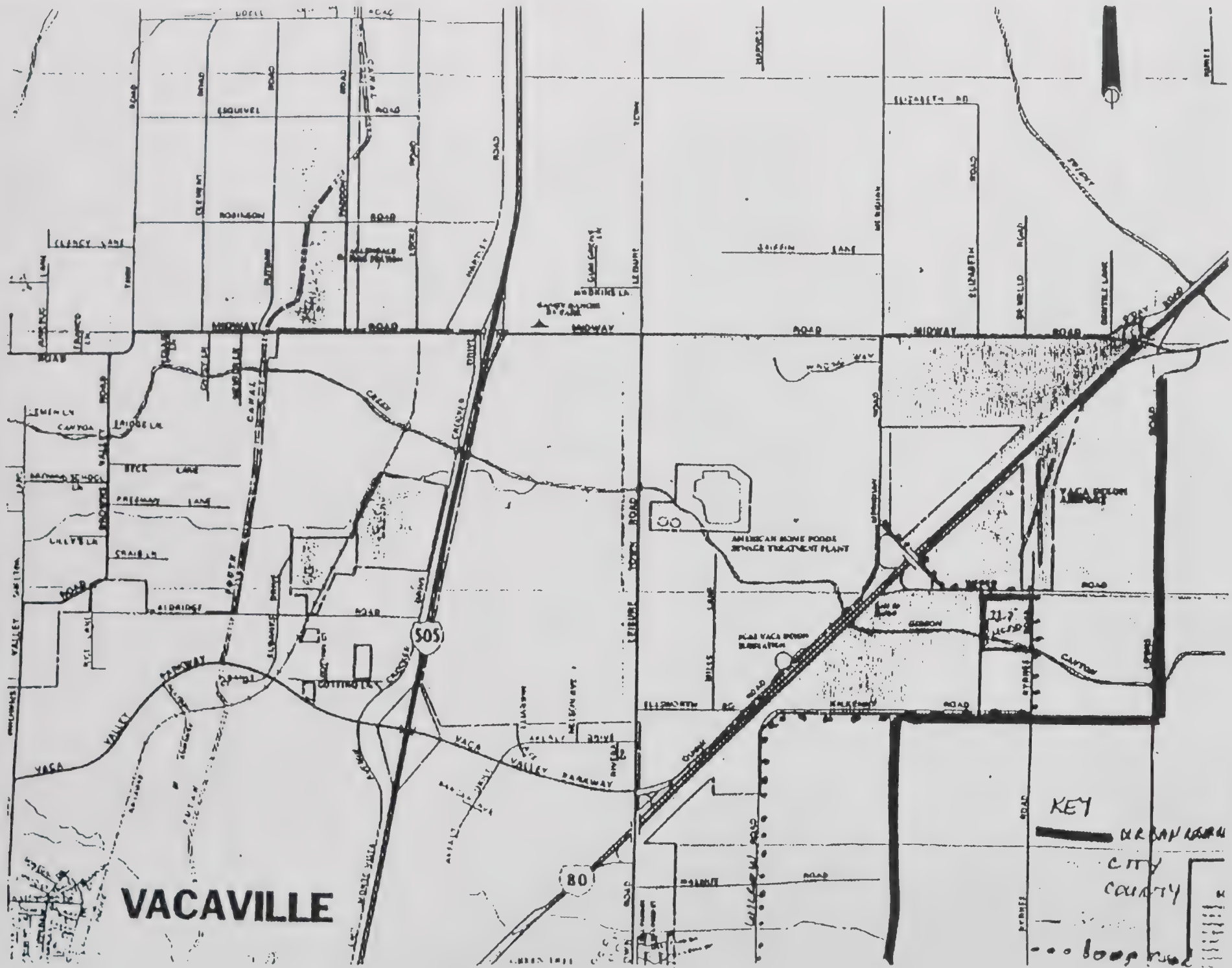
Please do not hesitate to call me at the number on the letterhead if you have any questions. Additionally I will be present at the December 14 meeting. Thank you for your consideration.

Sincerely,



Naida West

Enclosure: map



VACAVILLE

KEY

- CITY LIMITS
- ROAD
- HIGHWAY
- LOOP ROAD

Response to Comments by Naida West on behalf of Pacifico Gonzales

1. The EIR on the Proposed Plan was circulated for public review during a 45-day comment period as prescribed by state law. In addition, the General Plan revision process provided opportunities for public comment during initial community meetings, over 34 General Plan Committee meetings, and public hearings before the Planning Commission and City Council. Cable television broadcasts and General Plan newsletters also kept the community aware of plan choices.
2. The public was not excluded from participation in the General Plan revision process. Early in the Sketch Plan review, general public comments on the concepts of the different Sketch Plans were considered by the General Plan Committee prior to beginning the discussion by geographic areas.
3. In the context of the EIR, comparisons between the Sketch Plans clearly point out the differences between Plan A, with emphasis on growth to the north and west, and Plan B, with emphasis on more growth to the east than the west, and Plan C, which focused on limited physical expansion. Whether the General Plan process should have included additional meetings for review of the Land Use Diagram is a question beyond the scope of the General Plan EIR.
4. Comment noted; see response below on item 5. (See also discussion on alternatives discussed in the response to SACOG comment on Land Use, p.61.)
5. The observations about urbanization east along the I-80 corridor relate to the Committee's decisions on the Plan. It is not the role of an EIR to explain "why"; the EIR is solely a vehicle for analyzing the environmental consequences of a project, identifying mitigation, and comparing the proposed project with alternatives. This Plan EIR meets these objectives.

There is an active agricultural production occurring to the east and north of the City, but that is no longer the case in the west valleys. Protecting those areas where present agriculture production is still existing was one of the Committee's considerations in determining to move to the west as opposed to the I-80 corridor and to the east. Further, there appears to be a more logical system of providing extension of public services in that direction. Finally, the cities of Vacaville and Dixon recognize that a community separator should be developed between those two communities and, thus, premature development along the I-80 corridor would limit the ability of the two communities to plan the community separator. As a consequence, the City believes there is no need to move along the I-80

corridor beyond that area planned for urban uses within the 20-year growth contemplated by the proposed General Plan.

Regarding the loss of biotic resources, the Plan EIR notes that this impact remains significant even with mitigation. The conclusion is that the impact is significant and adverse and, we believe, the evidence presented supports that conclusion.

On the question of whether the Plan is environmentally preferred, the authors of this EIR do not believe that specific statement was made. Rather, our objective is to show how the Plan responds to environmental considerations with guiding policies and implementing policies. We recognize that reasonable people may disagree about which way the City should grow and have noted this as an issue to be resolved and a major area of controversy in section 1.4 of Chapter 1 of the EIR. Thus, the EIR does not obscure the issues, but rather informs decision-makers of them, which is the role it is to perform under State Law. (See also, additional discussion on alternatives discussed in the response to SACOG comment on Land Use, p. 61.)

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June 7, 1990

RECEIVED

JUN 8 1990

CITY OF VACAVILLE
PLANNING DIVISION

Ms. Maureen Traut
Senior Planner
City of Vacaville, Planning Division
Community Development Department
650 Merchant Street
Vacaville, CA 95688

RE: PROPOSED VACAVILLE GENERAL PLAN AND DRAFT ENVIRONMENTAL IMPACT REPORT

Dear Maureen:

This letter is intended to supplement our comments addressed in our letter to the Planning Commission dated May 31, 1990. We have completed our review of the proposed General Plan and Draft Environmental Impact Report and thought it appropriate to provide specific comments relative to these documents.

As is stated in the proposed General Plan and DEIR, the lower portion of the Lagoon Valley is located within the boundaries of the Fairfield-Suisun Unified School District. According to the figures presented in these documents, the proposed new residential development within our district boundaries would generate a total of 380 new students. (Grades K-6, 215 students; grades 7-8, 55 students; and grades 9-12, 110 students)

On page 54 of the DEIR it states, "The area of the Lower Lagoon Valley lying within the jurisdiction of the Fairfield-Suisun Unified School District is proposed for transfer from that district to the Vacaville Unified School District in the interest of achieving a closer correspondence between the City of Vacaville Planning Area boundary and school district boundaries." Although we are willing to discuss the merits of such a proposal we believe it to be very premature to conclude that this area would be best served by the Vacaville School District. According to our preliminary evaluation, for example, it would appear that the driving distances from the lower Lagoon Valley to the closest elementary, middle or high schools would be approximately the same regardless of whether the project is served by the Vacaville School District or the Fairfield-Suisun Unified School District.

Ms. Maureen Traut
Page 2
June 7, 1990

The District would be willing to discuss this issue with the City of Vacaville and the Vacaville Unified School District. Be assured, our mutual intent would be to provide the best service to the students generated by this new residential growth.

Please contact me at 427-7087 if you have any questions regarding this issue.

Sincerely,

A handwritten signature in cursive script that reads "Denis Murray".

Denis Murray
Facilities Planner

ps
cc: Tom Chalk
Cecil Babcock
Ron Chan
Lyle Welch

(DLM41)

Response to Fairfield-Suisun Unified School District

In evaluating driving distances, it should be noted that the Proposed General Plan anticipates a new elementary school to be located about two-thirds of a mile northeast of I-80 in Upper Lagoon Valley. Access would be provided by a re-aligned Pleasants Valley Road.

The EIR recognizes that further discussion between the school districts and the City is in order; the boundary readjustment is simply a proposal which is made in the General Plan. Policy 5.3-15 simply states that such adjustments be considered if the change "would benefit the safety of school children and reduce their travel time to school." If these benefits would not occur, then a change would not be in order.



SIERRA CLUB

REDWOOD CHAPTER - SOLANO GROUP

355 Parkview Terrace, L-6, Vallejo, CA 94589

JUN 20 1990

CITY OF VACAVILLE
PLANNING DIVISION

June 20, 1990

Vacaville Planning Commission
650 Merchant ST.
Vacaville, CA 95688

RE: Vacaville Draft General Plan

Dear Mr. Glen Matsuhara:

The Solano Group-Sierra Club is submitting its comments and recommendations to the proposed Vacaville General Plan (GP) and draft EIR. Our Group consists of over 1,000 members, and all reside in Solano County.

We have grave reservations over aspects of the GP, and see particular problems with the proposed conversion of prime agricultural lands for development.

Also included, is a copy of the Sierra Club public policy on land use. We feel that our policy offers suggestions that can help government plan for needed growth while at the same time provide for the best environmental protection that can be expected.

I hope that you will contact me should you desire clarification on any of our comments.

Thank-you for your time and for listening.

Sincerely,

A handwritten signature in cursive script, appearing to read "Jim DeCoster".

Jim DeCoster
Conservation Chair

attachments: Sierra Club comments on
proposed GP, 6 pages.

2. Sierra Club Land use policy

cc: Solano County Board of Supervisors
Orderly Growth Committee

SOLANO GROUP-SIERRA CLUB

Planning Commission
City of Vacaville

June 20, 1990

Transportation

Two major difficulties stand out in reviewing the GP and EIR reports. Firstly, even after proposed expansions and improvements are made, most major transportation corridors will be woefully inadequate for projected growth rates. Secondly, little local planning has been made for transportation alternatives.

The proposals in the GP are based on an assumption of a 30% reduction in peak traffic levels over the present situation. Measures including Transportation Systems Managements (TSM) may help to deal with congestion and diminishing air quality but cannot be relied on exclusively, particularly in the wake of a 74% increase in population. (HE ch. 6, p. 11)

According to tables 4.1 A and 4.1 B in the EIR Ch. 4 pp. 27-8, we can see an increasing deterioration in traffic flow over the next 20 years, even assuming the above mentioned 30% reduction in traffic. This leads to the necessary acceptance on the part of the City of LOS E and F service in downtown and industrial park areas. Mitigations mentioned in EIR Ch. 4 p. 30-32 do not include the use of public transit, only the widening of pre-existing roads and the elimination of driveways. According to GP Ch. 6, p. 8; section 6.2-I2 says, levy fees will be used exclusively for roadway improvements. We suggest that levy fees be used on a fair share basis to provide a transitional phase for implementing viable public transit.

The GP Ch. 6, p. 11-12, sec. 6.4, cursorily mentions the need of public transportation as a part of a Transportation Systems Management (TSM). The GP contains several specific maps for street improvements and detailed descriptions of intersection widenings. Unfortunately, there are no specific plans regarding public transportation. We would like to know why there is not a transit element in the proposed GP?

The planning of local transit needs should not wait for project specific proposals. The draft GP is remiss in addressing local transit needs, and weak in acknowledging major changes necessary to improve air quality. Funding can come for projects only if the direction of local planning expresses the need.

We applaud the public improvements of bike/foot paths. However, we would like to make the following suggestions: Due to the high volume of traffic to be experienced within the City according to Fig. 4 EIR ch. 4, p. 30, the bike routes proposed on Nut tree Rd., Peabody Rd. and Monte Vista Ave. should be upgraded to bike paths. If streets are not scheduled for widening, we suggest safety evaluation for the addition of bike routes.

According to the California Clean Air Act, the Sacramento Valley Area is considered an area of serious air quality problems which mandates the City to

Transportation

implement traffic control measures to substantially reduce passenger vehicle trips and miles traveled per trip. Without transportation alternatives, we question the ability of TSM to bring air standards within compliance levels by December 31, 1997. By expanding existing roads and highways, in view of the tremendous growth projected, we can only anticipate a rapid increase in pollutants as well.

Striving for a jobs-housing balance within the community is admirable. However, the scenario of projecting a 4-fold increase in local jobs based merely on commercial zoning statistics, is optimistic and shouldn't be relied on for discounting a continuing problem of a commuting public. The GP, with its long lead time, must prepare for a less optimistic scenario.

Due to the recent air quality litigation, the Metropolitan Transportation Commission (MTC) and the Sacramento Area Council of Governments (SACOG) may have difficulty in approving highway projects beyond, and including the 1988 Strategic Transportation Improvement Program (STIP). This suggests that it is imperative that local communities act favorably in planning for transit needs. Also, There needs to be a county-wide plan for bus-ways and bike-ways to see how this will integrate with the City's transportation plans, furthering these goals.

Plan policy 2.5-G8 should be a guiding principle for directing higher density housing in locations that can be served by viable transit. (Please see additional comments under Housing Element response)

An efficient transit system conveys many benefits to communities including efficient energy utilization, reduction of lost work time and better air quality. There should be an impetus to reduce the need for a two-earner families to maintain two or more automobiles, thus freeing disposable income for other needed purposes. All of these considerations can improve the quality of life in Vacaville.

SOLANO GROUP-SIERRA CLUB

Planning Commission
City of Vacaville

June 20, 1990

Land Usage

Solano County is experiencing some of the greatest growth in population and urban area. The County also possesses productive agricultural lands, especially the West Valleys, which are currently protected from urban disruptions, and are ideally located close to urban food markets. In view of California's continuing growth needs, the West Valleys should be preserved for food production and for the amenities that this rural open space affords as a buffer between two growing cities.

As mentioned in the draft EIR Ch. 2, p. 12, the Solano County General Plan envisions agricultural land use in the West Valleys. Relative to this area, we recommend that the proposed GP be consistent with the county GP.

CEQA requires agencies not to approve proposed projects "if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects" of projects. (PRC Sections 21002 and 21002.1)

The EIR fails to elaborate on which, and to what degree, planning sectors would be affected by the Alternative Plans. This makes it impossible to compare the Alternative Plans with the proposed Plans. Table 5.3-A mentions that 5,753 acres of open space would remain, compared to the proposed Plan. On this point, the EIR does not differentiate between urban open space and rural open space or agricultural lands, nor does it suggest that the exclusion for development of the West Valleys is part of Plan C. The EIR does not describe where, if at all, the additional rural open space would be preserved.

The EIR Ch. 4, p. 97, para. 4, states that, "a reduction in urban service area could preserve more prime agricultural land, but parcel sizes and location could limit the long-term viability of such a mitigation measure." Please explain how this is so?

Regarding feasible mitigation, EIR CH. 4, Pg. 97 states that "The Plan's proposal for an Agricultural Service Area is intended to mitigate impacts on prime farmland by providing a definite geographic limit to urbanization." A decreasing supply of available water is the real constraint to future urbanization. Also, it is beyond the City's jurisdiction to insure protection of agricultural lands outside the City's proposed boundaries.

The proposed mitigation seeks to go outside existing city boundaries, in the case of West Valleys; urbanize 1,582 acres of prime agricultural lands, and declare protection for the rest that is either mountainous or of poor quality soils.

Consequently, the proposed mitigation is moot and valueless, since the

Land usage

conversion of prime agricultural land for development is assured under the proposed Plan. Since feasible alternatives are not present in the EIR, and feasible mitigation, as offered, is not genuine, the draft EIR violates CEQA provisions, as mentioned above..

In EIR, Ch. 4, the soil classification systems are described which determine prime agricultural land. Considerable attention is given to the economic productivity of the subject soils. Through a discussion of these systems, incorrect inferences can be construed from the descriptions of soils and from the availability of water.

Example 1: EIR Ch. 4, pg. 86 states that,

The Storie Index's ... weakness is that much of the data is outdated and, because it deals only with the physical and chemical properties of the soil, it fails to account for climate, availability of water, distance to market, and importance of specific croplands to the local economy.

Example 2: Under the Important Farmland Inventory System, EIR Ch. 4, pg. 88 states that,

To be classified as prime, land must possess a reliable source of water, a water table maintained at a level sufficient to allow crops to grow...

On p. 89, the EIR further mentions that the data may become obsolete, that the irrigation requirement may exclude land from prime.

These kinds of data often don't support each other. But a greater problem exists in that developers and their supporters, not acquainted with these details, can misconstrue the economic criteria as valid evidence for determining the suitability of farmland for development.

Soils that are important for the production of food must be distinguished from the precept of Agriculture which allows for poor farming or accounting methods, or day-to-day fluxuations in commodity prices.

It is assumed that EIR Ch. 4, p. 97 refers to economic losses of agricultural lands due to development. Based on the example of a loss of acreage in tomatoes vs. that of barley, again, economic losses should not be inferred as an inducement for taking farmland for development.

The availability of water from irrigation or from urban depletion of ground water sources is determined by political choices which should not detract from the value of prime soils as a natural resource. If these contexts exist, this should not be used for determining the suitability of agricultural lands for development. It is by political choice that irrigation water has been provided to urban users as well.

According to EIR Ch. 4, p. 95, the planned business park development in Lower Lagoon Valley would not affect prime soils. What is the basis for this argument? The contention that it would not affect prime soils is false because the proposed zoning would preclude all farming. If the figures are correct in the EIR, a total of 782 acres of prime land would be condemned for development.

Land usage

The ridgelines along the Upper and Lower Lagoon Valleys protect farming with natural buffers against the usual urban distractions of domestic dogs, trespassers, and neighborhood complaints of dust. These are inviolate assets to productive farming in an increasingly urbanizing California. The Valleys, being bounded by ridgelines, also gain protection from winds and frost that can play havoc on crops if grown elsewhere.

There is certainly plenty of room within the other planning sectors for channeling planned orderly growth.

The preservation of these substantial acreages of Class I and II prime soils makes good public policy.

SOLANO GROUP-SIERRA CLUB

Planning Commission
City of Vacaville

June 20, 1990

Housing Element

The City should strive to utilize vacant land within its existing boundaries for planned unit development. These should be medium to high density development that can be easily serviced by transit. Such development should be clustered around community services such as stores, banks and post offices to enable residents to walk to these conveniences. The proposed GP relies heavily on the development of single family dwellings increasing the aforementioned traffic difficulties. (Please refer to Sierra-Club urban land use policy)

In addition we advocate urban planning with redevelopment and revitalization of older neighborhoods that have outlived their usefulness. By strategic use of urban redevelopment, in-fill housing, multi-family units and "clustering" commercial developments within neighborhoods, open space can be preserved. As a guideline, whatever amount of land is developed, an equal amount of non-urban open space must be preserved.

To facilitate these changes, planners need to enhance the job-housing balance to avoid the difficulties of traffic congestion and air pollution associated with large numbers of commuters. These jobs need to reflect the cost of housing within the community so that jobs can be filled by local residents. We recommend that affordable housing be provided for at least 50% of all new jobs created within the City. End.

exemptions from parking and traffic limitations,
check *ordinances*

o funding for rehabilitation of older housing into affordable units,

o legalization of "in-law" or second units without additional parking requirements,

o broadening of zoning ordinances to more readily accommodate quality manufactured housing as an alternative to more expensive conventional housing,

o utilization of certain publicly-owned urban lands such as HUD properties and unused CALTRANS rights of way which are served

4

policies which maximize pedestrian, mass transit and bicycle access to job, entertainment and commercial centers:

- only areas well served by mass transit shall be zoned for commerce, offices and manufacturing;

- lands around transit stations shall be zoned for higher density development in order to facilitate transit use;

- urban transportation planning shall place an increased emphasis on public transit, car-pooling, van-pooling, pedestrian and bicycle routes as well as related trip reduction and congestion management techniques;

- public transit services shall be highly coordinated to enable easy and timely transfers between them, with information on routes readily available, and preferential rights of way and the ability to pre-empt traffic signals wherever possible.

- parking in business, commercial and industrial centers shall be limited or made more expensive in order to encourage transit use;

IV. Regional Planning

Effective regional planning and decision making is necessary to address the complex resource protection (air and water

6

~~ANALYSTS SHOULD BE ADVISED THAT~~
User fees are recommended for the costs of maintaining infrastructure.

Taxes to pay for infrastructure shall be placed on those transactions that chiefly affect the facilities of concern (i.e. a gas tax rather than a sales tax to pay for roads).

Existing urban areas shall pay for maintenance of their own infrastructure, and not be substantially subsidized by new development.

5

incentives for an appropriate balance of transportation and land use;

New Towns

In considering "new town" proposals, it is first necessary to distinguish them from leap frog subdivision proposals or sprawl. The characteristics which would qualify a development proposal to be considered as a new town must include:

- basic jobs (those which are not mostly dependent upon local consumers),
- housing affordable to the people who will have those jobs,
- infrastructure such as transit, roads, sewer and water services;
- necessary community infrastructure such as schools, medical care, and parks; and
- full commercial services such as food, fuel, etc.

Regional employment and housing needs should be met within the existing urban framework. New towns shall only be considered under the following conditions:

o Because of the potential region-wide impacts of new towns on transportation, economic and environmental systems, regional planning and decision making authorities should be in place before California embarks on any new town program.

7

o Before a new town is considered for a region, an analysis must be completed of employment and housing needs within that region.

o New towns shall be permitted only if it can be shown that regional employment and housing needs cannot be met within the existing urban framework.

o A new town should be a self-sustaining community (10,000 minimum population) and shall be buffered from the next town by permanently protected open space.

o It is essential that a new town not serve as a destructive economic drain on existing urban centers within the region.

o It is not appropriate to cancel Williamson Act contracts in the process of approving a new town development proposal. Non-renewal -- and the long term planning approach evidenced by that method -- is the only appropriate method for dealing with any Williamson Act contracts which cover lands considered for new town development.

o Development of a new town is meaningful as an alternative to urban expansion onto prime agricultural or other valuable resource lands only if similar resource lands are permanently protected in conjunction with construction of the new town.

o To protect the continued viability of surrounding agricultural and resource lands in previously undeveloped rural areas, a new town plan must include a permanently protected greenbelt or agricultural buffer.

o The design of any new town must comply with the "Within Urban Boundaries" policies stated in another section of this platform.

V. Long-Term Limits to Growth in California

Land use measures alone do not address the dynamics of the current 30 million Californians and a 750,000 increase each year. Even if future growth is accommodated in the most environmentally sound manner, eventually population will exceed a level sustainable by available natural resources.

The Sierra Club has long supported population stabilization for each nation of the world as an essential element of long-term environmental protection. No land preservation, energy conservation or pollution-control programs can be ultimately successful if population increases without limit.

As a state, California is less able to influence its

population increase than a sovereign nation can. California's growth is affected both by births among its residents as well as by the attractiveness of the state relative to other places.

At a minimum, California should do the following:

o Each state resource or pollution-control agency should conduct an assessment of the level of future population the built or natural environment under its purview can sustain without further deterioration. Following the preparation of such analyses, the state should adopt an explicit population policy endorsing a reasonable goal for future growth which is in harmon with the ecosystem upon which life depends.

o The state should provide adequate funding for family planning programs, so unwanted fertility in California is reduced to an absolute minimum.

o Regional planning efforts should include similar assessment of the long-term carrying capacity of their region.

DEFINITIONS:

Infrastructure: public facilities necessary to support residential and commercial development.

metropolitan regions: multiple cities of 10,000 to 150,000 in close geographic proximity with total population of at least 250,000.

Response to Sierra Club

Transportation

1. The Proposed Plan notes that the City has an existing local bus system which will be expanded as new development occurs. The Plan also has a policy, revised by the City Council, which states, "Encourage the construction of regional rail facilities, including a regional rail stop, that will serve Vacaville; encourage the implementation of an intercity public transit/bus system to link Vacaville with adjoining communities."
2. Mitigation measures on pp. 30-32 do not include regional public transit because this is not solely a local issue to be implemented. The implementation of regional public transit is dependent upon coordination of numerous agencies, and, of course, funding.
3. Fees are not proposed to be collected for public transit. The local bus transit system is 100-percent funded through gas tax monies distributed by the State to counties.
4. Transit policies are contained within the Transportation Element. See item 1 above.
5. The City of Vacaville has been actively involved in preparation of the *Draft Interim Regional Air Quality Plan*. Although this plan is not yet adopted, the General Plan contains policies consistent with the direction of this Draft Interim Plan. Beside TSM, other measures such as park and ride lots, and provision of bikeways and bike storage lockers may be adopted as a part of the Interim Plan and are addressed in the General Plan.

Land Usage

Regarding the analysis of alternatives by sector, the sketch planning process included detailed discussion (at more than 20 meetings) of the land use choices on a sector-by-sector basis. This EIR could not duplicate the volumes of testimony presented; rather the intent is to summarize what the choices were. Further, the Plan Diagram does not include "rural open space" as a category separate from "agriculture/open space" so the EIR could not describe where this type of land would be preserved. On the other hand, the General Plan Diagram clearly distinguishes urban open space from agriculture/open space so areas affected are illustrated.

Regarding the reduction in the urban service area, if there is no buffer between agricultural operations and residential development, then aerial spraying must

APPENDIX

APPENDIX A

DRAFT EIR REFERRAL LIST

The following agencies or groups were sent a copy of the Draft Environmental Impact Report (DEIR) for review at the start of the 45-day review period:

Association of Bay Area Governments
Caltrans District 10
City of Dixon Planning Department
City of Fairfield Planning Department
City of Suisun City Planning Department
Department of Water Resources
Fairfield-Suisun Unified School District
Sacramento Area Council of Governments
Solano County Airport Land Use Commission
Solano County Environmental Management Department
Solano County Local Agency Formation Commission
Solano County Orderly Growth Committee
Solano County Transportation Department
Solano County Water Agency
Solano Irrigation District
Travis Unified School District
Ulati Resource Conservation District
Vacaville Chamber of Commerce
Vacaville Unified School District
Yolo-Solano Air Pollution Control District
*Air Resources Board
*Department of Conservation
*Department of Fish and Game
*Department of Food and Agriculture
*Department of Food and Agriculture
*Department of Parks and Recreation
*Native American Heritage Commission
*Regional Water Quality Board
*State Clearinghouse

*Agencies sent DEIR by State Clearinghouse

APPENDIX B

REVISED GENERAL PLAN UPDATE TRANSPORTATION STUDY

TECHNICAL REPORT FOR THE GENERAL

PLAN UPDATE TRANSPORTATION

STUDY IN THE CITY OF VACAVILLE

JULY 12, 1990

Prepared by:

TJKM Transportation Consultants

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EW/jlb

TECHNICAL REPORT FOR THE GENERAL

PLAN UPDATE TRANSPORTATION

STUDY IN THE CITY OF VACAVILLE

JULY 12, 1990

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CHAPTER 1

INTRODUCTION

The overall purpose of the transportation element of the General Plan Update was to determine the ultimate roadway lane configurations needed to accommodate the revised land use plan for buildout of the City of Vacaville study area. This was done by generating future p.m. peak hour traffic volumes using a computer traffic model, "MINUTP". The model is used to test the impacts of various modifications to the Vacaville street network and to determine impacts of changes to the City's General Plan. This report summarizes the results and recommendations determined from the Vacaville Citywide traffic study.

The traffic study incorporated present and future land uses within the City service area. This service area consists of the boundary shown in Figure 1. For areas outside Vacaville it was assumed that existing Solano County residential areas would continue to grow. Future through traffic growth was based on historic trends determined from Caltrans traffic counts.

The p.m. peak hour, which occurs between 4 to 6 p.m., was used because it has the highest Citywide traffic levels. This was determined through the analysis of existing traffic counts. It is acknowledged that some streets have higher peaks at different hours; but overall, the Citywide p.m. peak hour (4 to 6 p.m.) is the highest.

The traffic model was calibrated through an existing conditions model. The calibration runs fine tuned the model's assumed trip generation rates, distribution patterns, and roadway network speeds and capacities.

The future condition model used trip generation rates and the distribution pattern developed through the existing conditions model and projected future land uses in the study area. The future condition model was an estimate of the land uses and traffic conditions due to build-out of the proposed City of Vacaville General Plan. Chapter 3 further describes each of the future condition models.

In order for the circulation network, both citywide and regionally, to accommodate the build-out of the proposed General Plan, several things would need to occur. They are either a decrease in land use densities, implementation of a very aggressive TSM program, construction of new local and regional roadways or a combination of all three.

This study specifically analyzes 37 major intersections which are near freeway interchanges and/or are high volume intersections. Once a General Plan is adopted the Citywide Transportation needs to be updated to include the findings of this report and to specifically analyze the remaining major intersections in the Study Area. This study is not intended to be used as the analysis for specific development proposals.

In public meetings regarding future acceptable intersection and roadway levels of service (LOS), the City Council decided that, where feasible, a LOS C should be used. LOS C was chosen to allow for future growth in the Vacaville area beyond the General Plan build-out timeframe. Unlike other public facilities, roads are more difficult and costly to come back at some time in the future and widen to accommodate future demand. The City Council felt that its better to design additional capacity in the road network at this time and as a minimum reserve the right-of-way to account for future needs. They chose this policy rather than design for a LOS D or worse at this time and then need to come back in 20 years to buy right-of-way to accommodate future traffic.

Included in Appendix A is a description of how a traffic model works and a definition of technical terms.

CHAPTER 2

MODEL CALIBRATION AND DEVELOPMENT

In order to model a location or community, it is necessary to calibrate the model to an area's particular trip generation and travel characteristics. The existing land use data and existing roadway network data (shown in Figure 2) are used in the transportation model to adjust trip generation rates or travel parameters until the model's projected existing traffic volumes reflect those actually occurring on a community roadway network. This process is necessary to increase confidence in the transportation model future traffic projection results.






Model Description

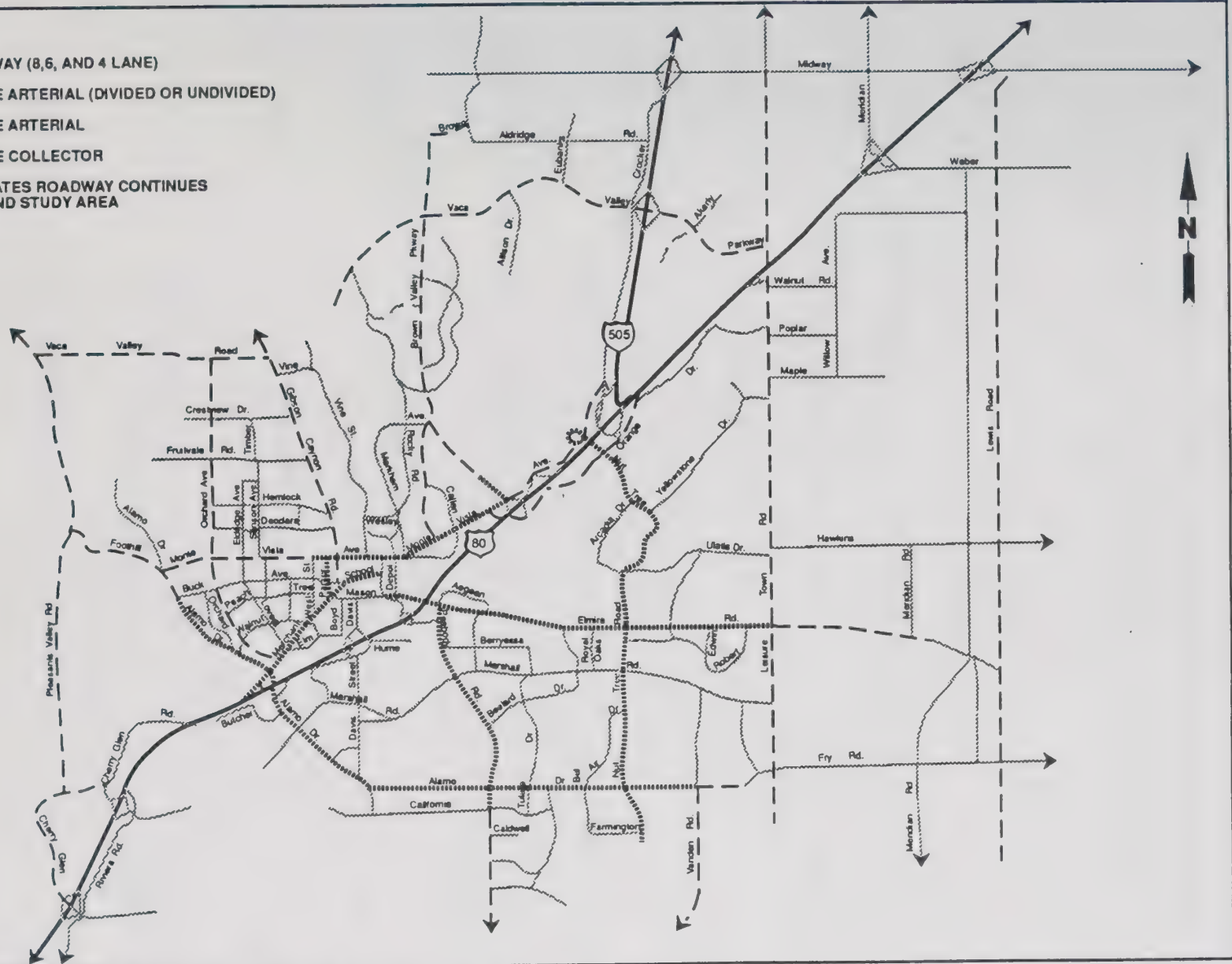
In this study, a computerized modeling system called Microcomputer Urban Transportation Package or "MINUTP" was utilized to simulate and project future traffic conditions in Vacaville. The system, developed from the Federal Highway Administration (FHWA) Transportation Model "UTPS" Urban Transportation Planning System for large mainframe computers, uses a gravity model technique to assign traffic to a street system based on existing and projected land uses. The "MINUTP" system is one of the more sophisticated transportation planning software systems currently available for a micro-computer. The system operates on an IBM compatible personal computer, and adapts many of the programming options and sophistication previously only available on a large urban system model utilizing a mainframe computer.

Model Development

To determine the traffic impacts of development in Vacaville, it was necessary to establish a total study area and a detailed modeling study area. The total study area included all of Vacaville and destinations outside Vacaville such as Sacramento, Fairfield, the Bay Area, and other areas of Solano and Yolo Counties. Large super zones were used to aggregate data in the total study area. See Table I for a listing of the super zones and their service areas.

LEGEND:

-  FREEWAY (8,6, AND 4 LANE)
-  4 LANE ARTERIAL (DIVIDED OR UNDIVIDED)
-  2 LANE ARTERIAL
-  2 LANE COLLECTOR
-  INDICATES ROADWAY CONTINUES BEYOND STUDY AREA



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FIGURE 2 EXISTING ROADWAYS BY TYPE

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The existing and future modeling study area boundaries were developed and consist of the limits of the City service area. In developing the existing and future conditions transportation models, the study area was divided into 370 separate traffic zones and 19 super zones.

TABLE I

SUPER ZONE/CORDON STATION SERVICE AREA ASSUMPTIONS

<u>CORDON STATION</u>	<u>SUPER ZONE SERVICE AREA</u>
401 (Interstate 80)	Fairfield and the Bay Area
402 (Pleasants Valley Road)	Winters, Lake Berryessa, Napa, and North Solano County
403 (Gibson Canyon Road)	North Solano County and West Yolo County
404 (Brown Valley Road)	North Solano County and West Yolo County
405 (Interstate 505)	Winters and Woodland
406 (Leisure Town Road)	Solano and Yolo County, Travis AFB, and Rio Vista
407 (Interstate 80)	Davis, Dixon, and Sacramento
408 (Kilkenny Road)	East Solano County

TABLE I (Continued)

409 (Hawkins Road)	East Solano County
410 (Elmira Road)	East Solano County
411 (Fry Road)	East Solano County
412 (Meridian Road)	South Solano County & Travis AFB
413 (Leisure Town Road)	South Solano County
414 (Vanden Road)	Fairfield & Travis AFB
415 (Peabody Road)	Fairfield & Travis AFB
416 (Midway Road)	East Solano County
417 (Midway Road)	West Solano County
418 (Weber Road)	East Solano County
419 (Meridian Road)	North Solano County

The boundaries of the traffic zones were determined by examining the location of existing and future roads, existing and future land uses and other physical boundaries such as rivers, freeways, and railroad facilities.

Super zones were used to aggregate trip productions and attractions in the areas outside the model study area. The super zones were designated in the model as external cordon stations and are located at all major roadways into and out of the study area (see Figure 3). The cordon station locations also identify all routes which may be used by through traffic. Traffic produced by or attracted to the study area with origins or destinations outside the study area (internal-external or external-internal trips) will use the cordon stations. The percentage of internal-external and external-internal trips that are likely to use each cordon is shown on Figure 3.

Through traffic is defined as trips which have both origins and destinations outside the study area, yet travel through it. Existing through traffic levels were estimated by calculating the difference between field counts and the City-only traffic volumes projected by the computer model. Future through (external-external) traffic was determined by factoring the existing through traffic volumes with a growth rate of 1 percent per year. The growth rate was calculated using Caltrans traffic volumes on Interstate 80 and Interstate 505 for the last 10 years. Additional traffic is generated from projected land use in the study area.

Trip Generation

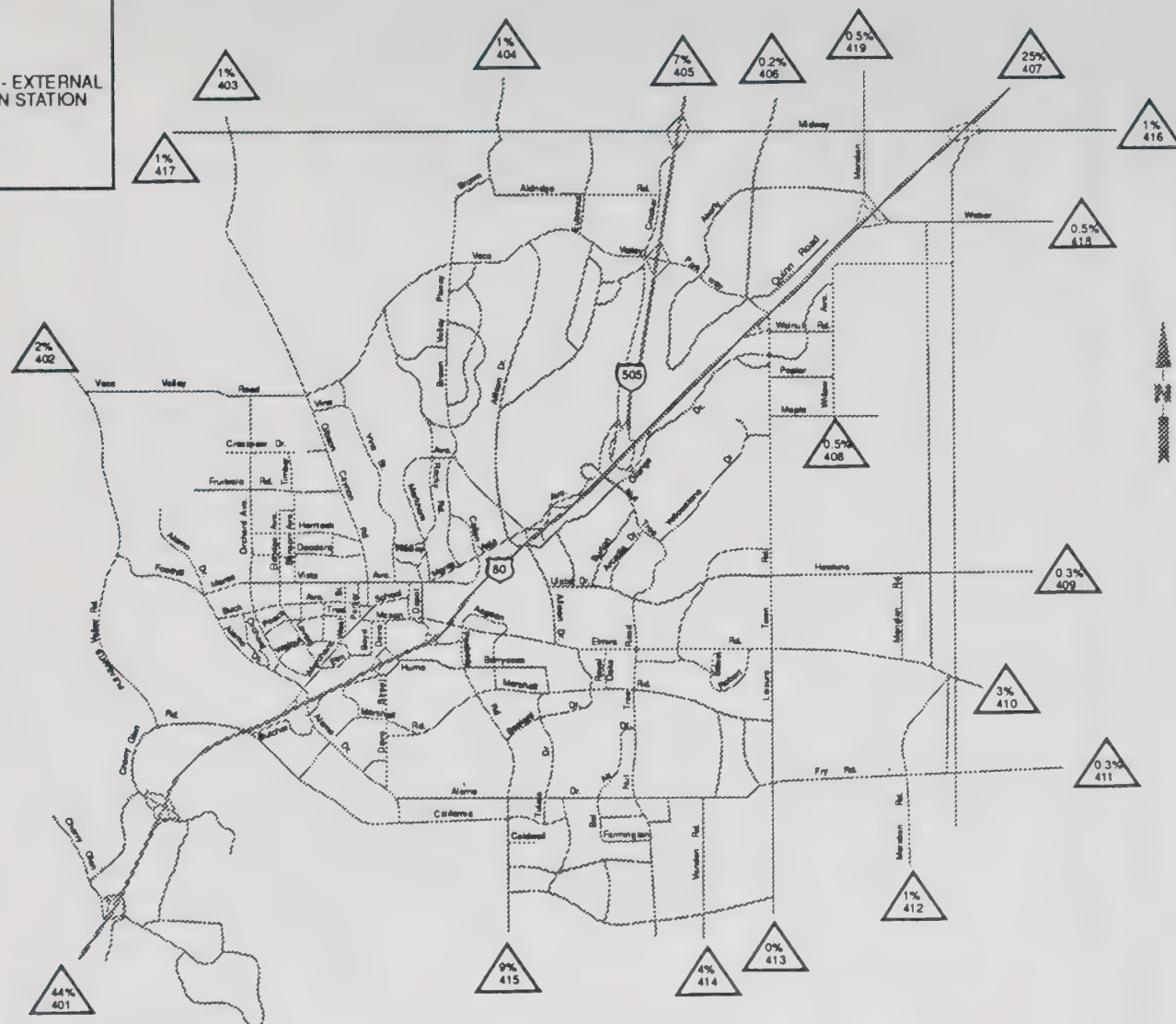
Model study area trip generation is based on the types and quantities of land use within a traffic zone multiplied by a standard trip generation rate. The land use quantities could be acreage, square feet, number of employees, dwelling units, income levels or just about any quantity that has some form of trip generation rate associated with it. For this study, number of acres, number of dwelling units (DU), and number of students were used.

Trip generation rates were taken from *Trip Generation*, Third Edition, Institute of Transportation Engineers, and other sources. A summary of the trip generation rates is shown in Table II.

LEGEND:



PERCENT OF INTERNAL - EXTERNAL
TRAFFIC USING CORDON STATION
CORDON NUMBER



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FIGURE 3 EXTERNAL CORDON STATION DISTRIBUTION PATTERN

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In general, trip generation for each zone is defined in terms of productions and attractions, where residential uses are typically trip producers and commercial and industrial uses are trip attractors. The existing land uses and quantities of each use are shown in Table III. Land use data was obtained from the City of Vacaville General Plan and collected by the City staff. The existing land use represents the number of dwelling units or acres that have occupied buildings on parcels that were constructed and occupied in January 1, 1987.

TABLE II

TRIP GENERATION RATES

<u>LAND USE TYPE</u>	<u>PEAK HOUR TRIP GENERATION</u>
Single-Family Residential	
High Income	1.8 TE/DU
Medium Income	1.1 TE/DU
Low Income	0.7 TE/DU
Medium-Density Residential	0.8 TE/DU
High-Density Residential	0.6 TE/DU
Resort Residential	0.3 TE/DU
Mobile Home Residential	0.5 TE/DU
Retirement Residential	0.4 TE/DU
Office	18.0 TE/ACRE
Light Industrial	10.1 TE/ACRE
General Industrial	6.0 TE/ACRE
General & Neighborhood Commercial	30.0 TE/ACRE
Downtown Commercial	60.0 TE/ACRE
Highway Commercial	35.0 TE/ACRE
Service Commercial	15.0 TE/ACRE
Public Offices & Civic Center	10.0 TE/ACRE
Park & Public Facilities	4.0 TE/ACRE
Elementary/Junior High School	0.10 TE/STUDENT
High School	0.20 TE/STUDENT
Open Space/Agricultural	0.05 TE/ACRE
Church & Hospitals	5.00 TE/ACRE

NOTES: TE = TRIP ENDS
 DU = DWELLING UNITS

TABLE III

**STUDY AREA LAND USE TOTALS
BY LAND USE CATEGORY***

<u>LAND USE TYPE</u>	<u>TOTAL EXISTING**</u>
Single-Family Residential	11,124 DU
Medium-Density Residential	1,163 DU
High-Density Residential	3,912 DU
Mobile Home Residential	1,171 DU
Retirement Residential	1,227 DU
Office	28.8 ACRES
Light Industrial	214.8 ACRES
General Industrial	27.6 ACRES
General & Neighborhood Commercial	155.6 ACRES
Downtown Commercial	26.6 ACRES
Highway Commercial	64.9 ACRES
Service Commercial	76.9 ACRES
Public Offices & Civic Center	56.4 ACRES
Parks & Public Facilities	273.0 ACRES
Elementary/Junior High School	6,100 STU
High School	1,250 STU
Open Space/Agricultural	13,158 ACRES
Churches & Hospitals	29.4 ACRES

Notes: *The Land Use Type categories are for traffic generation purposes and do not correspond exactly to specific land use categories in the General Plan.

**The existing land use totals are from January 1, 1987.

Trip Distribution

To determine the interaction of travel within and between traffic zones and cordon stations the "MINUTP" system utilizes a standard gravity distribution model. In concept, the gravity model assumes that destinations requiring less travel time for a specific trip purpose have more attraction forces than alternative destinations that are further away but serve the same trip purpose. The strength of the attractive forces is a function of the size of the attraction and of the difference in travel time of competing destinations. The balancing of these trip productions and attractions within the study area and immediate region (as determined by external traffic at cordon station locations), determines the total net trip generation for the study area.

To calculate the distribution of traffic within and through the study area, several parameters needed to be provided to develop the traffic model. The first was to divide both production and attraction trips into three trip categories of home-work, home-other, and non-home based. Data on percentages of production trips in each of the home-based trip categories were derived from the *Transportation and Traffic Engineers Handbook*, Institute of Transportation Engineers (ITE). The second was to determine internal-internal/internal-external distribution for the three trip categories for both production and attraction trips.

Internal-internal trips are defined as trips that have both ends of a trip within the Vacaville study area. For example, a trip that is generated from a home in Vacaville to a job in Vacaville.

Internal-external trips are trips that have one end of the trip outside the Vacaville study area. Examples of these trip types include a person who lives in Vacaville but works outside of the study area, or someone who lives outside of the study area but drives to Vacaville to shop.

Table IV shows the internal-internal/internal-external production trip distribution for both existing and future condition models.

TABLE IV
**PRODUCTION TRIP INTERNAL-INTERNAL/
INTERNAL-EXTERNAL DISTRIBUTION**

<u>TRIP PURPOSE</u>	<u>INTERNAL-INTERNAL</u>	<u>INTERNAL-EXTERNAL</u>
Existing Condition Model		
Residential:		
Home-Work	60%	40%
Home-Other	85%	15%
Non-Residential:		
Non-Home Based	60%	40%
General Plan Build-out condition Model		
Residential:		
Home-Work	70%	30%
Home-Other	90%	10%
Non-Residential		
Non-Home Based	60%	40%

The internal-internal/internal-external distribution of attraction trips is related to the production trip distribution. The relationship is that the number of internal trips for each trip purpose for productions and attractions must be equal. Thus, once the production internal-internal/internal-external distribution and number of trips by each trip purpose is calculated, the attraction internal-internal/internal-external distribution is fixed because of this relationship. Table V presents the attraction internal-internal/internal-external trip distribution.

TABLE V
**ATTRACTION TRIP INTERNAL-INTERNAL/
INTERNAL-EXTERNAL DISTRIBUTION**

<u>TRIP PURPOSE</u>	<u>INTERNAL-INTERNAL</u>	<u>INTERNAL-EXTERNAL</u>
Existing Condition Model:		
Work (Ind./Office)	90%	10%
Other (Comml./School)	51%	49%
Non-Home Based	60%	40%
General Plan Build-out Condition Model:		
Work (Ind./Office)	35%	65%
Other (Comml./School)	34%	66%
Non-Home Based	60%	40%

Tables IV and V show the amount, in percentage, of residential (production) and commercial/industrial/office (attraction) trip generation that it likely to stay within Vacaville (internal-internal) and likely to leave Vacaville (internal-external).

In addition to determining the internal-internal/internal-external distributions, a directional distribution for trips entering or leaving the model study area were established. Using the total internal-internal/internal-external productions and attractions by trip category, trips were assigned to each external cordon based on its accessibility to residential, industrial and commercial land uses.

Table IV shows that as the General Plan land use goals are reached more residentially generated traffic (productions) will stay in Vacaville. Table V shows that because of a large amount of industrial/commercial/office growth that a high percentage of office, industrial and commercially generated traffic will have to come from outside of Vacaville to satisfy the demand for employees or shoppers.

Traffic Assignment

A capacity restraint methodology was used in assigning the traffic generated by the study area to the street network. Capacity restraint is a trip assignment methodology where traffic is assigned to the study area roadway network by increment. As various

facilities approach capacity, traffic is reassigned to less crowded facilities. This is done within the "MINUTP" model through the lowering of link speeds on facilities approaching capacity.

In Vacaville, the existing conditions model was run without the use of the capacity restraint part of the model and traffic was assigned to the network based on the shortest path from zone to zone. The capacities assumed for the roadways within this study are in Table VI. Figure 2 shows the existing roadway lane configuration and Figure 4 shows the existing p.m. peak hour volumes.

TABLE VI
ROADWAY CAPACITY BY CLASSIFICATION

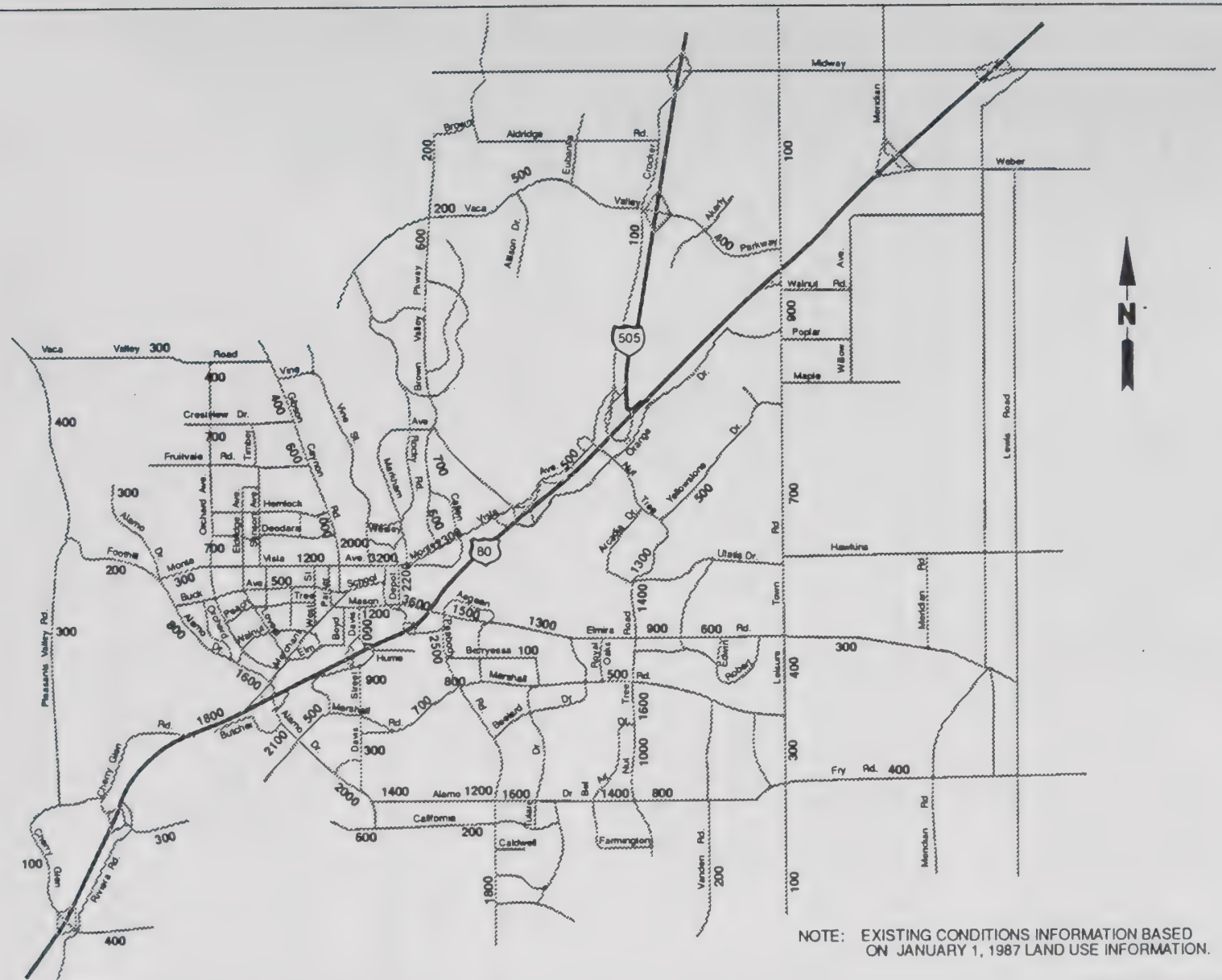
<u>ROADWAY TYPE</u>	<u>PEAK HOUR CAPACITY</u>		
	<u>LOS C</u>	<u>LOS E</u>	<u>PER LANE</u>
Eight-Lane Freeway	12,000	16,000	2,000
Six-Lane Freeway	8,000	12,000	2,000
Six-Lane Divided Arterial	4,500	6,900	1,150
Four-Lane Divided Arterial	3,500	4,500	1,150
Four-Lane Undivided Arterial	2,500	3,300	830
Two-Lane Arterial	1,500	1,660	830
Two-Lane Collector	1,000	1,400	700
Two-Lane Residential	750	1,000	500

NOTE:

LOS = Level of Service (see "Definition of Technical Terms" for description.)

It was assumed that a two-lane arterial is a street that has no residential frontage, limits access, and has left-turn pockets at major intersections.

Through traffic, as defined earlier, was also included in the assignment of traffic to the roadway network. Future through traffic was determined from the current growth rate on freeways and state highways (Caltrans).



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FIGURE 4 EXISTING P.M. PEAK HOUR VOLUMES

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Analysis Model

An existing conditions model, used to calibrate the traffic model assumptions, was developed in this study to finalize assumptions used in the future model. The model is calibrated by adjusting trip generation rates, trip distribution rates, and roadway network capacities and speeds until the model traffic projections are similar to those existing in the study area roadway network.

Variations in the existing traffic counts due to factors such as time of year and day of the week will make calibration of the model more difficult. A value of 5 to 10 percent variance between actual and calculated traffic volumes is used as a target value. In some cases, due to variables in human behavior or non-typical land uses, the target values cannot be obtained. In calibrating the existing conditions model, about 90 percent of the projected traffic volumes, at locations where traffic counts available, were within 5 to 10 percent of the actual peak hour field counts. This shows that the existing conditions model is calibrated correctly and is reasonably accurate in simulating existing field conditions.

The future conditions model used trip generation rates and trip distribution patterns developed in the calibration model and projected land uses in the study area.

Other Transportation Modes

Currently, the individual motor vehicle is the main form of transportation in Vacaville. However, other modes such as transit, bicycle, and walking, could provide some relief to future traffic levels if they provide a safe and quick alternative to the private automobile.

Transportation Systems Management (TSM)

Transportation Systems Management (TSM) measures are designed to reduce the number of vehicle trips during congested periods. Usually, TSM measures are used when the capacity of a street network cannot be physically increased, the practical limit of capacity has already been met, or the cost of providing additional capacity is prohibitive. Examples of TSM programs include ridesharing (e.g., carpooling, vanpooling, buspooling), alternative work hours, public transit, and parking

CHAPTER 3

GENERAL PLAN BUILD-OUT TRAFFIC MODEL RESULTS AND RECOMMENDATIONS

This chapter presents the results of the General Plan Update traffic model. Future roadway requirements and needs for new facilities are discussed. The analysis includes recommendations for intersection lane geometrics. For the study intersections, future lane configurations were assumed to be the same as those presented in the study entitled *Updated Citywide Transportation Study for the City of Vacaville* dated August 15, 1989. The new volumes generated from the update of General Plan land uses were applied to the existing General Plan roadway network. As a result of increased land use generating higher volumes, some additional lanes were required. Additional mitigation from the existing General Plan base is indicated where appropriate. Two scenarios are analyzed: 1) No TSM; and 2) With a 30 percent reduction in work trips generated from major employers.

Future Land Uses

The Vacaville General Plan Update was used as a guide in determining future land uses in the study area. The City Planning Division determined General Plan build out, land use acreages, dwelling units, and number of students.

Table VII shows the total uses for each land use category used in the General Plan model. From the table it can be seen that at General Plan Build-out the number of residential units in the City will increase 1.25 times, while commercial acreage will increase 4.0 times above the existing acreage level. Industrial and office acreage will grow the most in the next 20 years. Total acreage will increase 6.8 times.

The majority of the new residential growth in the City of Vacaville is expected in the south and east sections of the City, with industrial and commercial growth in the northeast section.

Future Roadway Network

The roadway network used in the General Plan Build-out analysis was determined from the City Circulation Element and input from the City's Public Works Department staff. Figure 5 shows the assumed future roadway network.

TABLE VII

**STUDY AREA LAND USE TOTALS
BY LAND USE CATEGORY***

<u>LAND USE TYPE</u>	<u>TOTAL EXISTING**</u>	<u>TOTAL PROJECTED***</u>
Single-Family Residential	11,124 DU	26,995 DU
Medium-Density Residential	1,163 DU	3,949 DU
High-Density Residential	3,912 DU	7,434 DU
Mobile Home Residential	1,171 DU	1,772 DU
Resort Residential		60 DU
Retirement Residential	1,227 DU	1,715 DU
Office	28.8 ACRES	281.6 ACRES
Light Industrial	214.8 ACRES	1,403.7 ACRES
General Industrial	27.6 ACRES	422 ACRES
General & Neighborhood Commercial	155.6 ACRES	838.5 ACRES
Downtown Commercial	26.6 ACRES	44.2 ACRES
Highway Commercial	64.9 ACRES	686.7 ACRES
Service Commercial	76.9 ACRES	106.5 ACRES
Public Offices & Civic Center	56.4 ACRES	262.9 ACRES
Parks & Public Facilities	273.0 ACRES	844.9 ACRES
Elementary/Junior High School	6,100 STU	21,300 STU
High School	1,250 STU	6,100 STU
Open Space/Agricultural	13,158 ACRES	5,668 ACRES
Churches/Hospitals	29.4 ACRES	1,028 ACRES
Private Recreation		898.9 ACRES

Notes: *The land use categories are for traffic generation purposes and do not correspond exactly to specific land use categories in the General Plan.

**The existing land use totals are from January 1, 1987.

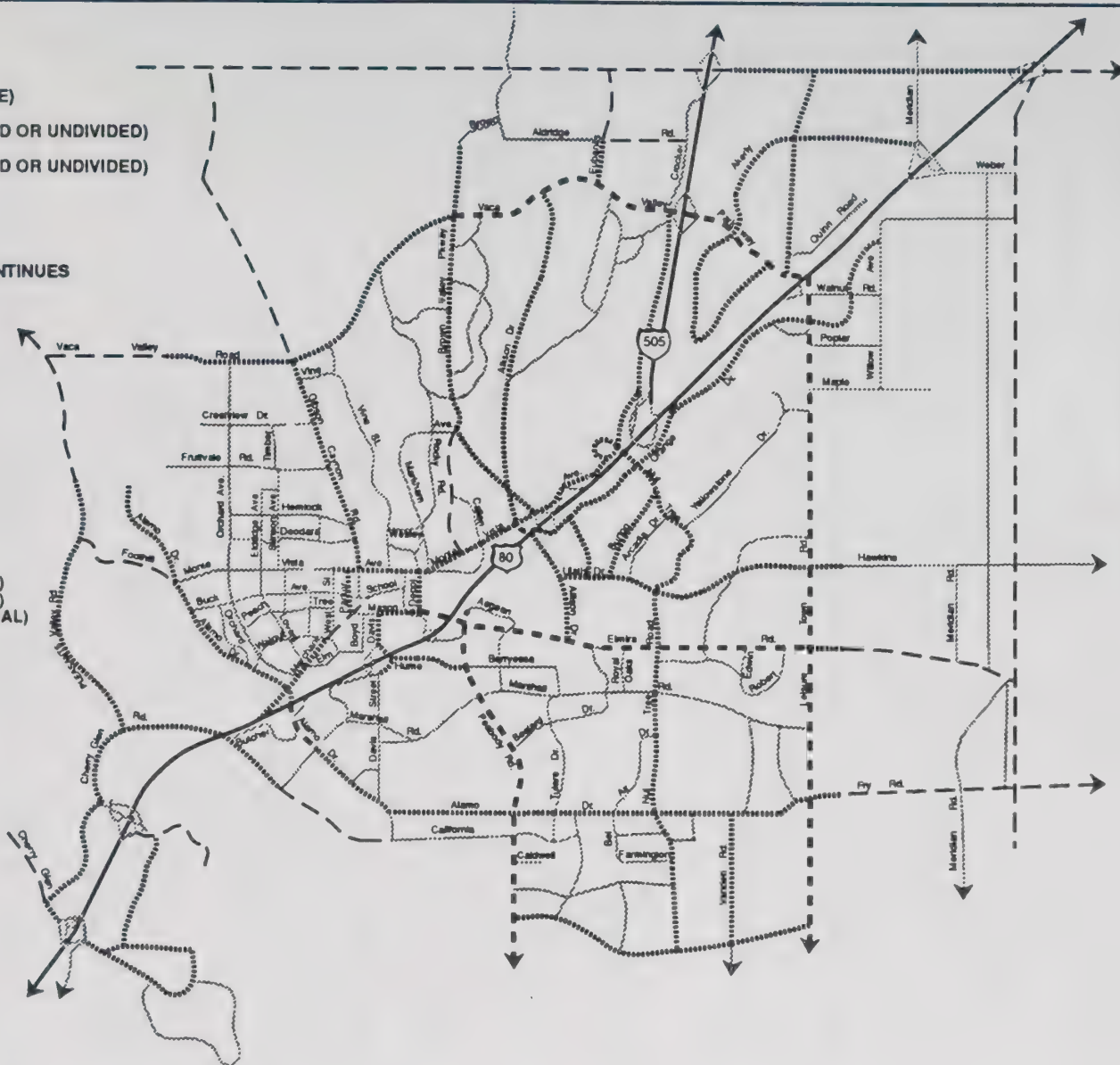
***The projected land use totals are at buildout of the proposed General Plan.

LEGEND:

- FREEWAY (8,6, AND 4 LANE)
- - - 6 LANE ARTERIAL (DIVIDED OR UNDIVIDED)
- 4 LANE ARTERIAL (DIVIDED OR UNDIVIDED)
- . - . 2 LANE ARTERIAL
- 2 LANE COLLECTOR
- INDICATES ROADWAY CONTINUES BEYOND STUDY AREA

PEAK HOUR TRAFFIC CAPACITIES
LOS C

- 12,000 FHP (8 LANE FREEWAY)
- 8,000 VPH (6 LANE FREEWAY)
- 4,500 VPH (6 LANE DIVIDED ARTERIAL)
- 3,500 VPH (4 LANE DIVIDED ARTERIAL)
- 2,500 VPH (4 LANE UNDIVIDED ARTERIAL)
- 1,500 VPH (2 LANE ARTERIAL)
- 1,000 VPH (2 LANE COLLECTOR)



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FIGURE 5 RECOMMENDED FUTURE ROADWAYS BY TYPE

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Model Results

Using the General Plan Build-out land uses, projected improvements and additions to the existing roadway network and variables determined from the model calibration process, future peak hour traffic volumes were projected.

To analyze the future roadway network needs, a two-stage process was used: first, calculation of overall Citywide network link needs, that is sizing of existing and future facilities based on projected traffic volumes; and second, sizing of critical intersections based on projected turning movements. Both stages are necessary to evaluate future roadway needs in the City. Link-only road sizing ignores possible additional lane needs at intersections and intersection-only sizing would have a tendency to cause an over sizing of link network facilities.

Link Network Analysis

Projected traffic volumes for the General Plan Build-out with the assumed future roadway network are shown on Figure 6 (with TSM) and Figure 6A (without TSM). The traffic volumes are for the p.m. peak hour.

Heavily impacted areas, shown in Figures 7 and 7A, would be the areas around the Interstate 80/Leisure Town Road, and Interstate 80/Peabody Road. All or portions of Peabody Road, Leisure Town Road, East Monte Vista Avenue, Orange Drive, Nut Tree Road, Vaca Valley Parkway east of Browns Valley Road and Elmira Road/Mason Street west of Nut Tree Road are heavily impacted arterials. Without the implementation of a TSM program, these areas would be further impacted as well as Alamo Drive and Allison Drive.

Recommended network improvements are shown on Figure 8 and described in Table VIII. The recommendations are based on Level of Service C capacities shown in Table V and projected traffic volumes shown in Figure 6 and assume the trip generation of TSM.

Level of Service C was selected as the level of service to size future facilities. This was due to the long-range planning nature of this analysis. Level of Service C allows for future growth unforeseen by this report with an adequate comfort zone before the

TABLE VIII. RECOMMENDED ROADWAY IMPROVEMENTS

ROADWAY	BETWEEN	IMPROVEMENT
Vaca Valley Parkway	west of Orchard Avenue and Browns Valley Parkway	Widen from two to four lanes (and new four lane arterial where it does not yet exist)
	Browns Valley Parkway and I-80	Widen from two to six lanes
Orange Drive	Nut Tree Road and Leisure Town Drive	Widen from two to four lanes
	Its current terminus and west of Willow Avenue	Four lane arterial
Ulatis Drive	Nut Tree Road and Leisure Town Road	Widen from two to four lanes
	Allison Drive and Nut Tree Road	Four lane arterial
Mason Street/Elmira Road	Davis Street and Leisure Town Road	Widen from four to six lanes
	East of Leisure Town Road	Widen for two to four lanes
Fry Road	East of Leisure Town Road	Upgrade from two-lane collector to four-lane arterial
Cherry Glen Road	I-80 and California Drive	Widen from two to four lanes
Davis Street	Mason Street and Hume Way	Widen from two to four lanes
Eubanks Drive	Aldridge Road and Midway Road	Two lane arterial
Allison Drive	Monte Vista Avenue and Nut Tree Parkway	Six lane arterial
	Nut Tree Parkway and Elmira Road	Four lane arterial

TABLE VIII. RECOMMENDED ROADWAY IMPROVEMENTS

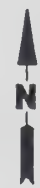
ROADWAY	BETWEEN	IMPROVEMENT
Midway Road	Gibson Canyon Road and I-505; east of I-80	Upgrade from two-lane collector to two lane arterial
	I-505 and I-80	Widen from two to four lanes
Leisure Town Road	City Limits and I-80; Alamo Drive and City Limits	Widen from two to four lanes
	I-80 and Alamo Drive	Widen from two to six lanes
Peabody Road	Elmira Road and City Limits	Widen from four to six lanes
Nut Tree Parkway	Nut Tree Road and Allison Drive	Widen from two to four lanes
Pleasants Valley Road	Alamo Creek and Cherry Glen Road	Widen from two to four lanes
Alamo Drive	I-80 and Marshall Road	Widen from four to six lanes
Gibson Canyon Road	Vaca Valley Parkway and Deodara Avenue	Widen from two to four lanes
Depot Street	Mason Street and Monte Vista Avenue	Widen for additional capacity
Browns Valley Parkway	Allison Drive and north of McMurtrey Lane	Widen from two to four lanes
E. Monte Vista Avenue	Browns Valley Parkway and Vaca Valley Parkway	Widen from two to four lanes
Allison Drive	Vaca Valley Parkway and E. Monte Vista Avenue	Widen from two to four lanes
Eubanks Drive	Vaca Valley Parkway and Aldridge Road	Widen from two to four lanes

TABLE VIII. RECOMMENDED ROADWAY IMPROVEMENTS

ROADWAY	BETWEEN	IMPROVEMENT
Akerly Loop	Connecting Meridian, Leisure Town Road and Vaca Valley Parkway	Four lane arterial
Burton Avenue	Ulatis Drive and Nut Tree Road	Four lane arterial
Hume Way	Davis Street and Peabody Road	Four lane arterial
California Drive	Peabody Road and Marshall Road	Two lane arterial
	Marshall Road and Pleasants Valley Road	Four lane arterial
Various roadways in the southeast sector and Lagoon Valley sector	----	Two and four lanes

Corresponds to Figure 6.3.

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NOTE: ALL VOLUMES ROUNDED TO THE NEAREST 100 VOLUME.

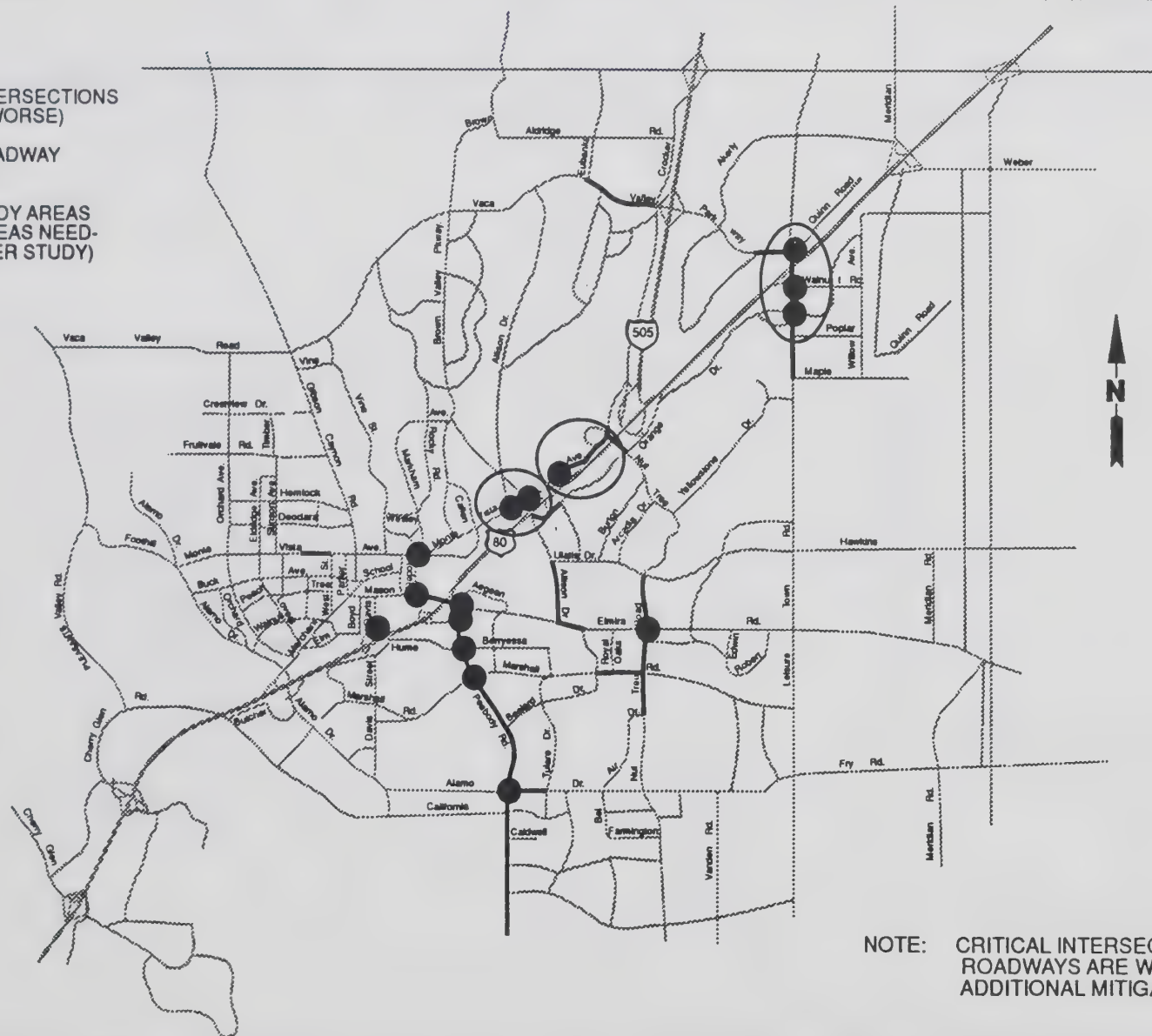
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FIGURE 6A PROJECTED P.M. PEAK HOUR VOLUMES WITHOUT TSM ASSUMPTIONS

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- CRITICAL INTERSECTIONS
(LOS D OR WORSE)
- CRITICAL ROADWAY
SEGMENTS
- SPECIAL STUDY AREAS
(CRITICAL AREAS NEED-
ING FURTHER STUDY)



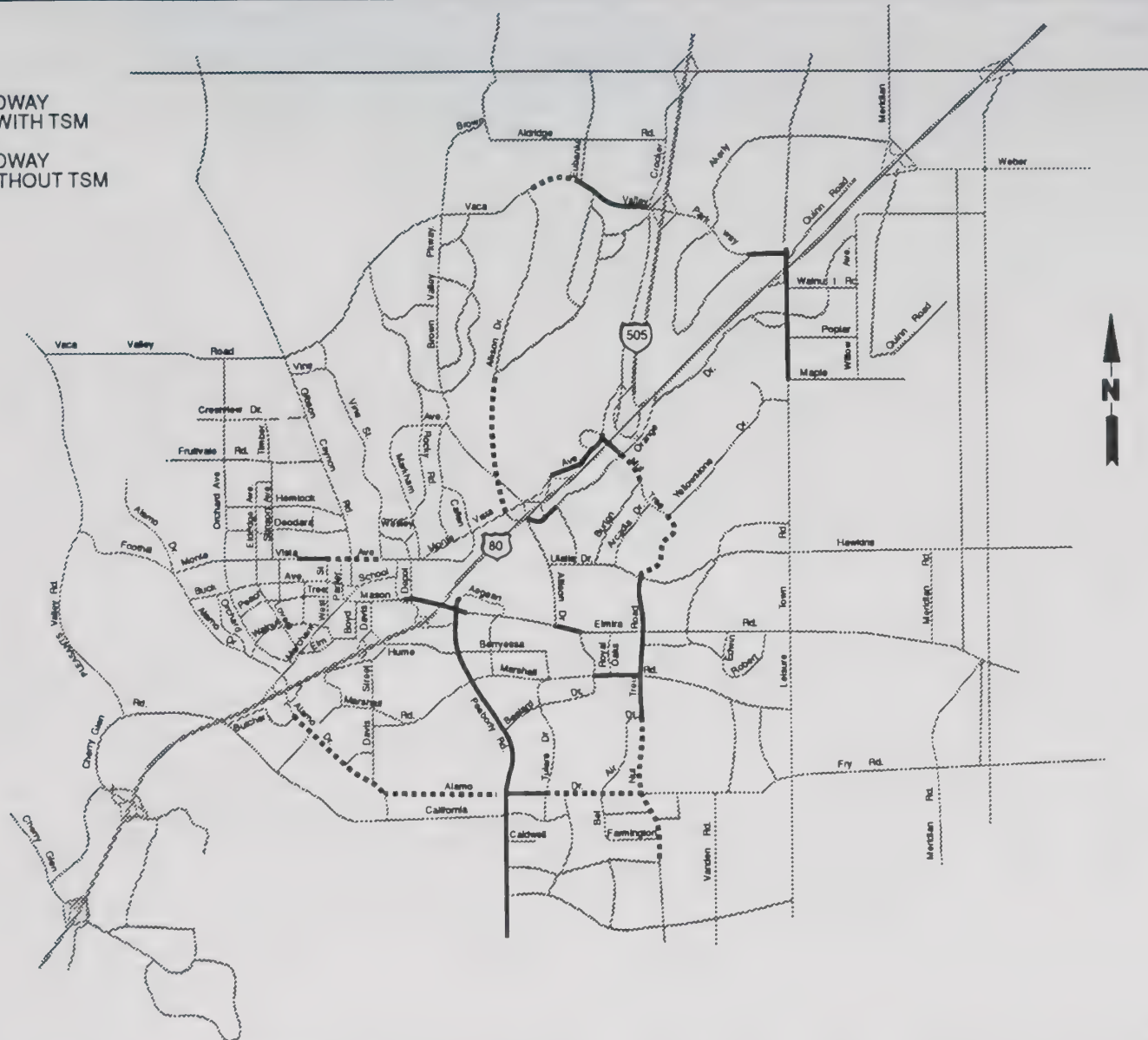
NOTE: CRITICAL INTERSECTIONS AND ROADWAYS ARE WITHOUT ADDITIONAL MITIGATION

FIGURE 7 LOCATION OF CRITICAL INTERSECTIONS AND ROADWAYS

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LEGEND:

- CRITICAL ROADWAY SEGMENTS WITH TSM
- CRITICAL ROADWAY SEGMENTS WITHOUT TSM

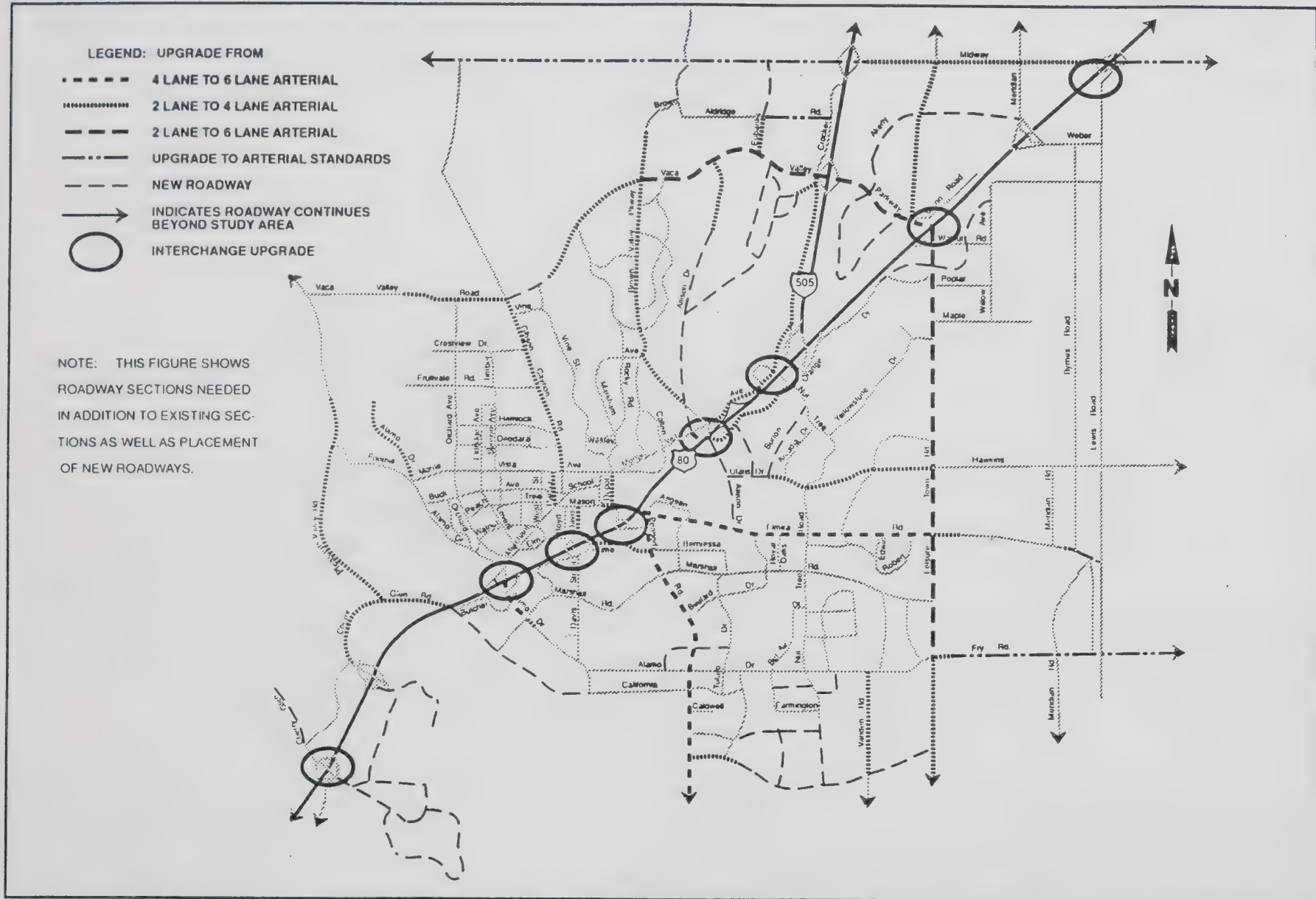


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FIGURE 7A LOCATION OF CRITICAL ROADWAY SEGMENTS WITHOUT TSM ASSUMPTIONS

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VACAVILLE DRAFT GENERAL PLAN UPDATE

FIGURE 8 MAJOR ROADWAY IMPROVEMENTS

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roadway facilities approach capacity. To do long-term planning, Level of Service D would not allow for future growth beyond the levels assumed in this analysis or changes in existing travel patterns.

The recommendations in this study should be used to reserve right-of-way in areas where development is starting or redevelopment is occurring.

The level of service classification system is a scale which ranks street, highway, and intersection operations based on the amount of traffic and traffic operations. A complete description of the system is included in the *Highway Capacity Manual* (Special Report 209) Highway Research Board, 1985. Briefly, the level of service ranking system is a scale with a range of A through F. Level A represents free-flow conditions and Level F represents jammed or capacity conditions.

In some areas, there is not enough right-of-way or pavement width to accommodate the number of lanes recommended in Figure 5 using the City standard roadway cross-sections. In those cases, it may be necessary to create non-standard cross-sections to accommodate the necessary lanes. To improve capacity on the City standard four-lane divided arterial section, on-street parking should be prohibited and driveway and street access be limited (especially at intersections). These recommendations are already in use on Nut Tree Road between Elmira Road and Alamo Drive and can add up to a 20 percent increase in capacity for a roadway. These improvements would increase the capacity (LOS C) of a four-lane divided arterial to 4,200 vehicles per hour.

Intersection Analysis

To further determine future roadway needs, a detailed analysis was conducted at 39 identified critical or major intersections. Figure 9 shows the location of the critical study intersections.

To evaluate the future lane geometrics at each of the critical intersections, a capacity analysis was conducted. The traffic volumes used in the analysis were taken from the existing conditions and General Plan Build-out conditions traffic model. The actual existing (1989) level of service may vary from that shown in Table IX (which represents 1987), but are shown to demonstrate improvements from "existing" LOS D

to projected buildout intersection operations. A Level of Service C criteria and maximum approach lane configuration of two left-turn lanes, three through lanes, and a right-turn lane were used as guidelines to aid in the design of each intersection. At some intersections there were existing land use constraints that were considered in the intersection design; thus, it was not feasible to obtain Level of Service C.

The critical movement summation method of capacity analysis was used in this report. This method involves consideration of "critical" (or high volume) conflicting movements and is based on information from a number of sources including *Highway Capacity Manual*, Special Report 209, Transportation Research Board, 1985.

The volume-to-capacity (V/C) ratio is an indication of the level of service (LOS) at which an intersection is operating. The level of service classification system is a scale which ranks street, highway, and intersection operations based on the amount of traffic and traffic operations. A complete description of the system is included in the *Highway Capacity Manual* (Special Report 209) Highway Research Board, 1985. Briefly, the level of service ranking system is a scale with a range of A through F. Level A represents free flow conditions and level F represents jammed or capacity conditions.

Table IX shows the projected level of service at all 39 critical study intersections for General Plan Build-out conditions as determined by the model. The recommended lane configurations for these intersections are shown schematically in Figure 10.1 through 10.6. Buildout volumes were first analyzed using currently approved and adopted intersection geometrics taken from the *Updated Citywide Transportation Study for the City of Vacaville* dated August 15, 1989. The intersection capacity results for the updated traffic volumes with currently approved future geometrics are shown in Column 2 of Table IX. Because of increased volumes, some intersection required additional mitigation. The additional mitigation is indicated by bolded arrows on the affected intersection drawing. Mitigated intersection capacity calculations are shown in Column 3 of Table IX.

It is recommended that the results of this analysis be used to obtain or reserve the necessary right-of-way for the improvements recommended. Actual intersection design should be done using detailed field counts and observing actual traffic patterns before implementation. For all arterial-to-arterial intersections and other

TABLE IX. INTERSECTION LEVEL OF SERVICE

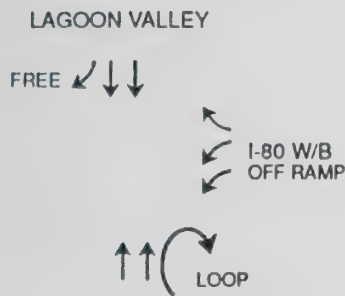
	Existing 1987		Draft General Plan*		Draft General Plan (Mitigated)	
	V/C	LOS	V/C	LOS	V/C	LOS
Lagoon Valley & I-80 W/B			0.33	A		
Lagoon Valley & I-80 E/B			0.65	B		
Cherry Glen & I-80 W/B			0.59	A		
Cherry Glen & I-80 E/B			0.74	C		
Alamo & Merchant	0.93	E	0.52	A		
Alamo & I-80 E/B	0.79	C	0.48	A		
Davis & I-80 W/B (Hickory)	0.67	B	1.00	F	0.72	C
Bella Vista & Davis	0.35	A	0.55	A	0.55	A
Davis & Hume			0.69	B	0.69	B
Depot & Mason	1.00	F	1.17	F	0.96	E
Mason and Peabody	0.84	D	0.83	D	0.72	C
Peabody & Cliffside	0.85	D	1.14	F	0.86	D
Allison & E. Monte Vista			0.77	C	0.77	C
Browns Valley & E. Monte Vista	0.39	A	1.15	F	0.83	D
E. Monte Vista & I-80 W/B	0.39	A	0.91	E		
Harbison & Nut Tree Parkway [New Ramps]			1.10	F	[0.67]	[B]
Nut Tree & E. Monte Vista			0.65	B	0.77	C
Orange & I-505 N/B			0.78	C	0.78	C
Orange & I-80 W/B			0.62	B	0.62	B
Leisure Town & I-80 W/B	0.27	A	1.40	F	0.79	C
Leisure Town & I-80 E/B	0.55	A	1.04	F	0.75	C
Vaca Valley & I-505 N/B	0.20	A	0.63	B		
Vaca Valley & I-505 S/B	0.15	A	0.76	C		
Midway & I-505 N/B			0.38	A		
Midway & I-505 S/B			0.47	A		
Midway & I-80 W/B			0.62	B		
Midway & I-80 E/B			0.72	C		
Meridian & I-80 W/B			0.79	C		
Meridian & I-80 E/B			0.48	A		
Peabody & Alamo	0.60	A	1.06	F	0.86	D
Peabody & Marshall	0.64	B	1.01	F	0.80	C
Peabody & California			0.77	C		
Nut Tree & Elmira	0.54	A	0.84	D	0.75	C
Nut Tree & Marshall	0.49	A	0.79	C	0.64	B
Peabody & Hume			0.97	E	0.97	E
Leisure Town & Orange			1.12	F	0.86	D
Depot & E. Monte Vista	0.85	D	0.92	E	0.92	E
Nut Tree & Orange			0.53	A	0.53	A
Allison & Nut Tree Parkway [New Ramps]			1.02	F	0.72	C
					[0.77]	C

* Assumes Current General Plan Intersection Geometrics.

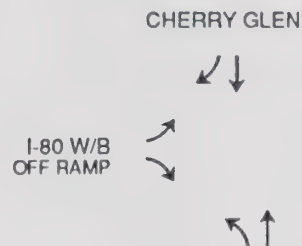
LOS = Level of Service

V/C = Volume to Capacity

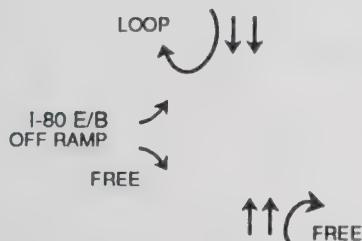
LAGOON VALLEY & I-80 WESTBOUND



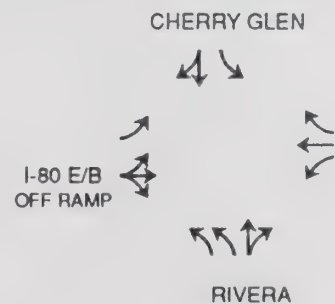
CHERRY GLEN & I-80 WESTBOUND



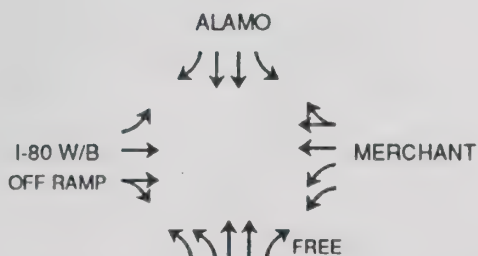
LAGOON VALLEY & I-80 EASTBOUND



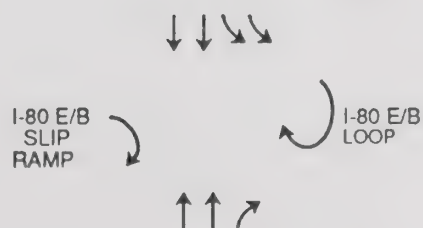
CHERRY GLEN & I-80 EASTBOUND



ALAMO & I-80 WESTBOUND



ALAMO & I-80 EASTBOUND



NOTE: BOLDED ARROWS INDICATE MITIGATION REQUIRED ABOVE AND BEYOND THAT RECOMMENDED IN THE UPDATED CITYWIDE TRANSPORTATION STUDY FOR THE CITY OF VACAVILLE DATED AUGUST 15, 1989.

VACAVILLE DRAFT GENERAL PLAN

FIGURE 10.1 INTERSECTION AND INTERCHANGE IMPROVEMENTS

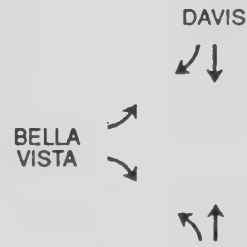
PREPARED BY

TJKM
56-065

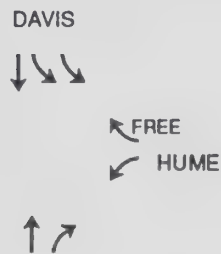
DAVIS & I-80



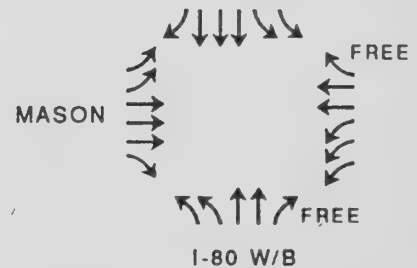
DAVIS & BELLA VISTA



DAVIS & HUME

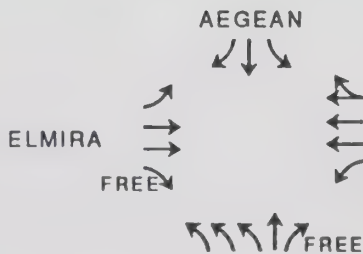


MASON & DEPOT



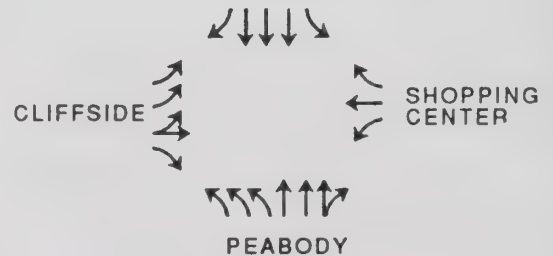
WITHOUT ADDITIONAL LANES, OR OTHER MITIGATION, THIS INTERSECTION WILL OPERATE AT LOS F.

ELMIRA & AEGEAN



PROJECTED TO OPERATE AT LOS D WITHOUT THE PROPOSED TRIPLE LEFT-TURN LANE

PEABODY & CLIFFSIDE



WITHOUT ADDITIONAL LANES, INTERSECTION IS PROJECTED TO OPERATE AT LOS F. WITH ADDITIONAL LANES, LOS D.

NOTE: BOLDED ARROWS INDICATE MITIGATION REQUIRED ABOVE AND BEYOND THAT RECOMMENDED IN THE UPDATED CITYWIDE TRANSPORTATION STUDY FOR THE CITY OF VACAVILLE DATED AUGUST 15, 1989.

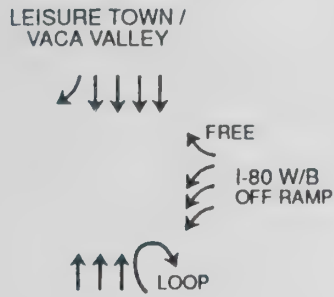
VACAVILLE DRAFT GENERAL PLAN

FIGURE 10.2 INTERSECTION AND INTERCHANGE IMPROVEMENTS

PREPARED BY

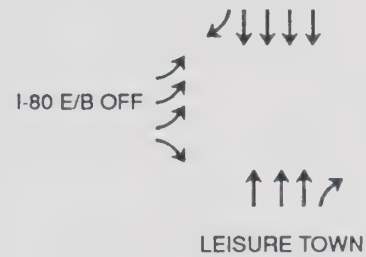
TJKM
56-065

**LEISURE TOWN & I-80
WESTBOUND ***



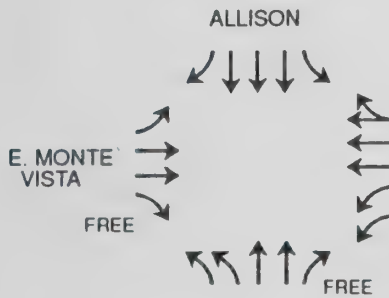
***SPECIAL STUDY AREA**

**LEISURE TOWN & I-80
EASTBOUND ***



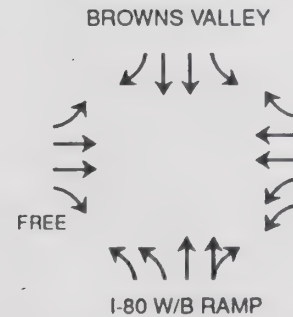
***SPECIAL STUDY AREA**

ALLISON & E. MONTE VISTA *



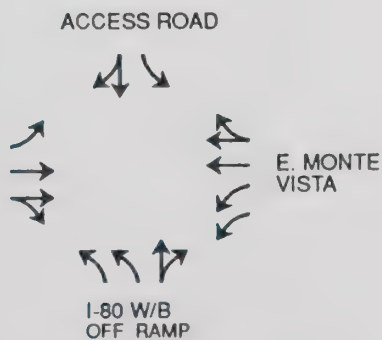
***SPECIAL STUDY AREA**

**BROWNS VALLEY &
E. MONTE VISTA ***



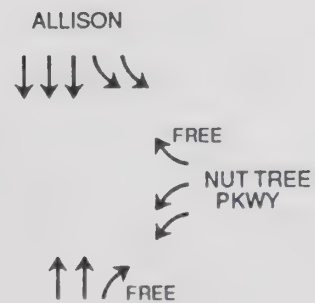
***SPECIAL STUDY AREA**

**I-80 WESTBOUND &
E. MONTE VISTA ***



***SPECIAL STUDY AREA**

ALLISON & NUT TREE *



***SPECIAL STUDY AREA**

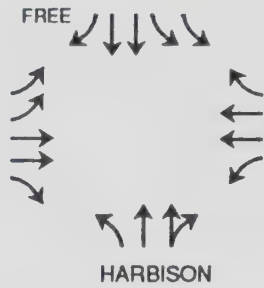
VACAVILLE DRAFT GENERAL PLAN

FIGURE 10.3 INTERSECTION AND INTERCHANGE IMPROVEMENTS

PREPARED BY

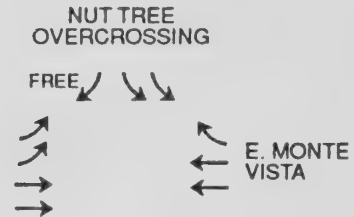
TJKM
56-065

HARBISON & NUT TREE *



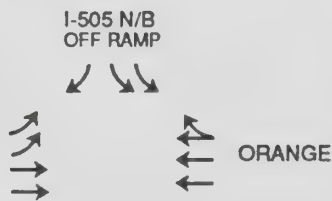
*SPECIAL STUDY AREA

NUT TREE OVERCROSSING & E. MONTE VISTA *

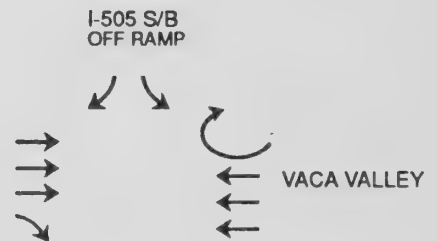


*SPECIAL STUDY AREA

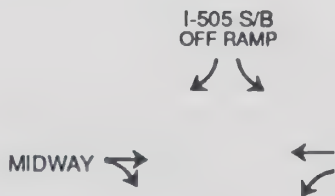
ORANGE & I-505 N/B



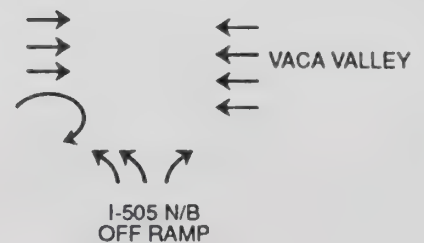
VACA VALLEY & I-505 SOUTHBOUND



MIDWAY & I-505 SOUTHBOUND



VACA VALLEY & I-505 NORTHBOUND



VACAVILLE DRAFT GENERAL PLAN

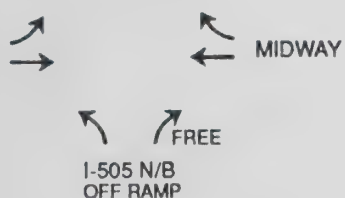
FIGURE 10.4 INTERSECTION AND INTERCHANGE IMPROVEMENTS

PREPARED BY

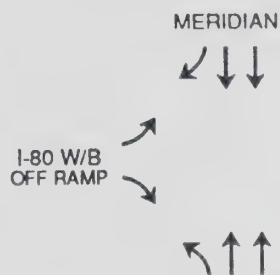
TJKM
56-065

*SPECIAL STUDY AREAS ARE DISCUSSED ON PAGE 21.

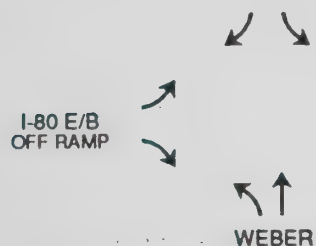
MIDWAY & I-505 NORTHBOUND



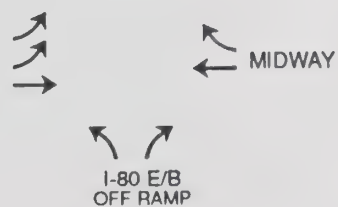
MERIDIAN & I-80 WESTBOUND



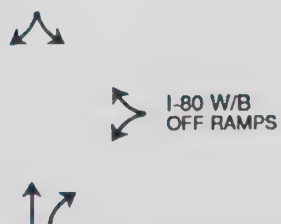
MERIDIAN / WEBER & I-80 EASTBOUND



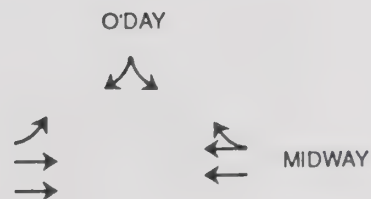
MIDWAY & I-80 EASTBOUND



O'DAY & I-80 WESTBOUND



MIDWAY & O'DAY



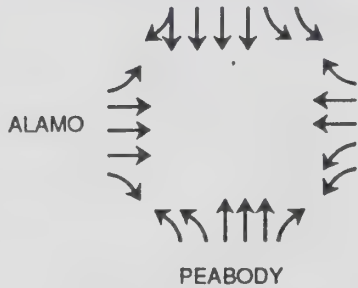
VACAVILLE DRAFT GENERAL PLAN

FIGURE 10.5 INTERSECTION AND INTERCHANGE IMPROVEMENTS

PREPARED BY

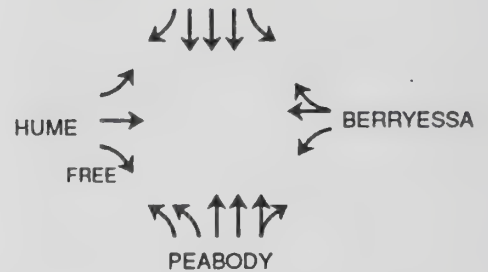
TJKM
56-065

PEABODY & ALAMO



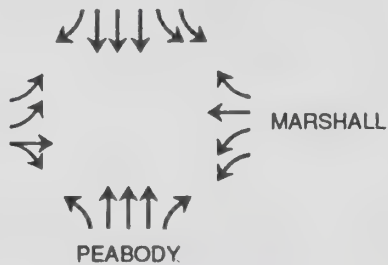
PROJECTED TO OPERATE AT LOS D
WITH MITIGATION; LOS F WITHOUT
MITIGATION

PEABODY & HUME



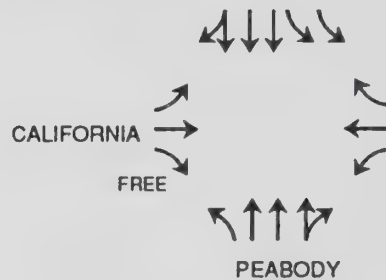
PROJECTED TO OPERATE AT LOS E

PEABODY & MARSHALL

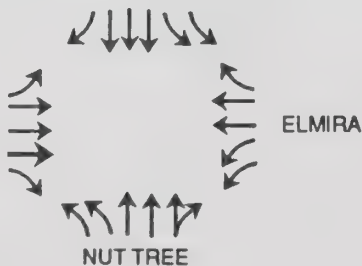


REQUIRES SUBSTANTIAL RIGHT-OF-WAY
ACQUISITION. WILL OPERATE AT LOS C
WITH MITIGATION; LOS F WITHOUT
MITIGATION.

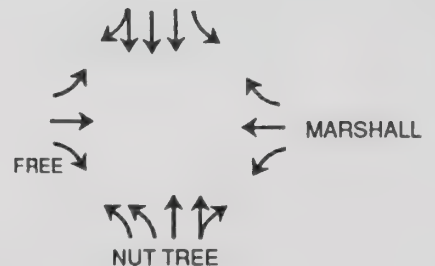
PEABODY & CALIFORNIA



NUT TREE & ELMIRA



NUT TREE & MARSHALL



NOTE: BOLDED ARROWS INDICATE MITIGATION REQUIRED ABOVE AND BEYOND THAT
RECOMMENDED IN THE UPDATED CITYWIDE TRANSPORTATION STUDY FOR THE CITY OF
VACAVILLE DATED AUGUST 15, 1989.

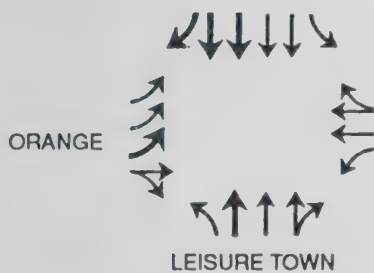
VACAVILLE DRAFT GENERAL PLAN

FIGURE 10.6 INTERSECTION AND INTERCHANGE IMPROVEMENTS

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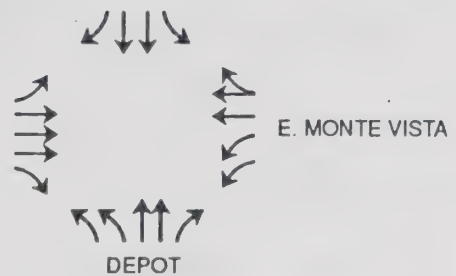
LEISURE TOWN & ORANGE *



* SPECIAL STUDY AREA

PROJECTED TO OPERATE AT LOS D WITH MITIGATION; LOS F WITHOUT MITIGATION.

DEPOT & E. MONTE VISTA



REQUIRES SUBSTANTIAL ROW THAT MAY NOT ECONOMICALLY OR PRACTICALLY BE FEASIBLE. PROJECTED TO OPERATE AT LOS E.

NOTE: BOLDED ARROWS INDICATE MITIGATION REQUIRED ABOVE AND BEYOND THAT RECOMMENDED IN THE UPDATED CITYWIDE TRANSPORTATION STUDY FOR THE CITY OF VACAVILLE DATED AUGUST 15, 1989.

*SPECIAL STUDY AREAS ARE DISCUSSED ON PAGE 21.

VACAVILLE DRAFT GENERAL PLAN

FIGURE 10.7 INTERSECTION AND INTERCHANGE IMPROVEMENTS

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TJKM
56-065

designated major intersections, the City should adopt a policy that would restrict or eliminate driveway access within 60 feet of the intersection on all arterial approaches. This policy would increase the capacity of the intersection.

Special Study Areas

Figure 7 identifies three areas as "Special Study Areas". These are areas where projected traffic volumes are such that the planned roadways will operate at low LOS. All of these areas need to be studied in more detail to determine appropriate mitigation and are beyond the scope of the General Plan Update Study. The three areas and the critical intersections in those areas are as follows.

I-80/Leisure Town Road: Special Study Area

Leisure Town Road/Orange Drive

Leisure Town Road/I-80 Westbound Ramps

Leisure Town Road/I-80 Eastbound Ramps

Options for the Leisure Town Road/I-80/Vaca Valley Parkway intersection need to be considered. The Orange Drive extension east of Leisure Town Road should be studied further; by not extending Orange Drive, the intersection will operate at a more acceptable LOS.

E. Monte Vista Avenue/I-80: Special Study Area

Nut Tree Overcrossing/E. Monte Vista Avenue

E. Monte Vista Avenue in front of the Nut Tree

Browns Valley Parkway/E. Monte Vista Avenue

I-80 Westbound Ramp/E. Monte Vista Avenue

East Monte Vista Avenue has very limited additional ROW in front of the Nut Tree and will not be able to carry projected volumes at an acceptable LOS. Alternatives need to be investigated in this study area.

Allison Drive/I-80: Special Study Area

Harbison Drive/Nut Tree Parkway

Allison Drive/E. Monte Vista Avenue

Allison Drive/Nut Tree Parkway

Projected eastbound Nut Tree Parkway and eastbound I-80 trips will not be accommodated at an acceptable LOS. An alternative eastbound I-80 on ramp needs to be studied in comparison to the planned roadway configurations.

APPENDIX A

The following is excerpted from
"A TRAFFIC MODEL FOR SMALL CITIES"

Traffic Quarterly, July, 1962
(A layperson's guide to how traffic models work.)

A traffic model is a mathematical statement of traffic movement based on observed relationships. Most models are based on empirical relationships which have established that the travel habits of individuals are similar and predictable, and that traffic flow between areas is related to the kind and intensity of development in those areas. Specifically, traffic models operate on the theory that trips are produced by persons living in a residential area and are attracted by various non-residential land uses. The strength of attraction varies directly with the intensity of development of the attracting land uses and indirectly with the time-distance between the attracting land use and the residential areas.

Commonly, the model is applied in this manner. The study area is divided into zones. Each zone is treated as producing and/or attracting trips. The production of trips by a zone is based on the number of trips to or from work, shopping, or "other". A zone attracts work trips based on employment, square footage, or acreage in the zone. Shopping trips are attracted on the basis of retail employment, retail sales, commercial floor area or commercial acreage in use in a zone. The attraction of other trips to a zone may be based on the number of dwelling units in the attracting zone, or the number of students enrolled in schools or colleges, etc.

External stations are established on the perimeter of the study area to deal with traffic moving into or out of the area.

All traffic flows, internal and external, are summarized and assigned to an existing or proposed street network, and an analysis is made of the ability and efficiency of the street network to carry the assigned traffic.

In order to test the reliability of the traffic model for a specific locality and, if necessary, to modify it before projecting future traffic, a model is prepared for the latest year for which land use data is available. Theoretical trip flow, simulated by the model and converted to vehicle trips, is then summarized on the existing street network. Counts are taken to determine actual traffic flows, and these are compared with theorized traffic. Adjustments to the model are not considered necessary if ~~actual~~ actual and theoretical volumes differ by less than 10 percent.

One of the drawbacks of traffic models is the time involved in assembling data needed for "input". It has become traffic model practice to divide the study area into zones having boundaries coterminous with census tracts (or with enumeration districts or census block groups) because the necessary land use, dwelling count, and employment inputs normally are tabulated and available by census tracts.

Some models deal with three or four types of trips (e.g., work, shopping, other-home-based, and non-home based) on a 24-hour basis. Some models consider only trips at peak hour. At peak hour, two types of trips predominate: 50 to 60 percent are trips to or from work, and 30 percent are non-work trips to or from commercial centers. Other-home-based (social) trips account for 20 percent of total daily traffic but only 10 percent of peak hour traffic; non-home-based trips, normally 15 percent of off-peak travel, account for only 5 percent of peak hour trips.

Time-distance between zones is the second factor in the distribution of trips. (Data on dwelling units, commercial floor space, and jobs make up the first factor.) Time-distance between zones is determined by inputting factors of roadway speeds, arterial network, and measured distances for individual roadway links. From the input data, the shortest time path from zone to zone is calculated. This method of shortest path calculation can be used for both daily and peak hour modeling and for existing and future conditions.

Models work best in closed systems (metropolitan areas or regions) where the volume of trips outside the study area is minor compared with the volume of trips within the study area. In those instances, external trips often will not affect the design of the traffic way's system and can be ignored. Where a model is applied to a study area that is less than a closed system, external traffic must be accounted for, summarized and distributed along with the internal trips. Since only the internal trips can be projected by the model, the external traffic information will be taken from similar model projections for county traffic way's.

All vehicle trips (except intra-zonal trips) are summarized on the existing or projected road network. These include internal, internal-to-external, and external (through) trips.

Some cautions are necessary in using any traffic model. The model is not an exact tool. It is not intended to be. It is intended for use during the preparation of master plans to test proposed road networks and to establish an "order of magnitude" of traffic needs. The basic data inputs often are sketchy and incomplete. The assumptions used are often imperfect.

The model is least accurate in areas of low-intensity development where there are larger zones, more trips per dwelling unit but fewer total trips, and many possible paths. Smaller zones increase accuracy. The model sometimes breaks down near the perimeter of the study area because of the relatively greater importance of external traffic flows near the perimeters.

Streets in the same corridor that allow different travel speeds once presented a problem in distributing trips: the higher-speed streets attracted traffic beyond reasonable capacities, while slower-speed streets remained unused. Today's models use constraints and friction factors to overcome that weakness.

Naphtali H. Knox, AICP

April, 1962 and September, 1985

APPENDIX A

DEFINITION OF TECHNICAL TERMS

Calibrate/Calibration: The process in which the traffic model is tuned to the special characteristics (traffic and trip generation) of the study area. This is done by attempting to have the model traffic volume projections "match" actual traffic volumes on roadways in the study area.

Gravity Model: A method of distributing trips based on the theory that trips are produced by persons living in a residential area and are attracted by various non-residential land uses. The strength of attraction varies directly with the intensity of development of the attracting land uses and indirectly with the time-distance between the attracting land use and the residential areas.

Level of Service (LOS): The level of service classification system is a scale which ranks street, highway, and intersection operations based on the amount of traffic and traffic operations. A complete description of the system is included in the Highway Capacity Manual (Special Report 209) Highway Research Board, 1985. Briefly, the level of service ranking system is a scale with a range of A through F. Level A represents free-flow conditions and Level F represents jammed or capacity conditions. (See Table B-1 in Appendix B)

Volume-to-Capacity (V/C) Ratio: This is a comparison of the actual or projected traffic volume on a roadway or at an intersection to the total capacity of the roadway or intersection.

Right-of-way (ROW): The total street width needed to accommodate, travel lanes, sidewalks and curb, and gutters.

Transportation System Management (TSM): TSM includes programs to reduce single occupancy vehicle travel. Programs include: Carpools, vanpools, park and ride lots, transit, bicycle facilities, parking restrictions, flex-time, work hours, and pedestrian facilities. To encourage bicycle and pedestrian use shower facilities at work can be provided. TSM programs are most effective in large office and industrial areas or large employment centers.

TABLE A-1
LEVEL OF SERVICE FOR URBAN AND SUBURBAN ARTERIAL STREETS

LEVEL OF SERVICE	DESCRIPTION	VOLUME TO CAPACITY RATIO*
A	Free flow. Very slight or no delay. If signalized, conditions are such that no approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Turning movements are easily made, and nearly all drivers find freedom of operation.	0.00-0.60
B	Stable flow. Slight delay. If signalized, an occasional approach phase is fully utilized. Vehicle platoons are formed. Many drivers begin to feel somewhat restricted within groups of vehicles. This level is suitable operation for rural design purposes.	0.61-0.70
C	Stable flow. Acceptable delay. If signalized a few drivers arriving at the end of a queue may occasionally have to wait through one signal cycle. Back-ups may develop behind turning vehicles. Most drivers feel somewhat restricted.	0.71-0.80
D	Approaching unstable flow. Tolerable delay. Delays may be substantial during short periods, but excessive back-ups do not occur. Maneuverability is severely limited during short periods due to temporary back-ups.	0.81-0.90
E	Unstable flow. Intolerable delay. Delay may be great, up to several signal cycles. There are typically long queues of vehicles waiting upstream of the intersection.	0.91-1.00
F	Forced flow. Excessive delay. Intersection operates below capacity. Jammed conditions. Back-ups from other locations restrict or prevent movement. Volumes may vary widely, depending principally on the downstream back-up conditions.	Varies*

References: *Highway Capacity Manual*, Special Report No. 209, Transportation Research Board, 1985.
Highway Capacity Manual, Special Report No. 87, Highway Research Board, 1965.
TJKM.

* In general, volume-to-capacity (V/C) ratios cannot be greater than 1.00, unless the lane capacity assumptions are too low. Also, if future demand projections are considered for analytical purposes, a ratio greater than 1.00 might be obtained, indicating that the projected demand would exceed the capacity.

APPENDIX B

SPECIFIC ASSUMPTIONS FOR THE VACAVILLE MODEL

This section will define specific assumptions and methodology used in the Vacaville City traffic model. These include roadway network and land use network files and trip generation equations. This chapter is meant to bridge the gap between the theories in the "MINUTP" users manual and practical uses of the model. Forms for various data files and examples of job streams files needed to run the Vacaville Model have been included at the end of this Appendix.

Network

The network files include information on the links, capacity (vehicles per lane per hour), average travel speeds (miles per hour), length (miles), originating node (A), destination node (B), number of lanes in one direction and if the link is one way or two way. A description of all of these variables are included in the "MINUTP" users manual NETBLD section. A sheet that can be used to enter data to build a network is included in at the end of this appendix.

In the Vacaville model the zone numbers begin at 1 and go to 400. Currently the numbers from 271 to 400 are unused to allow for future expansion of the model. However, expansion of the model is not limited to those 46 zones. The external cordon numbers begin at 401 and currently end at 419.

The network nodes start at 420 and currently end at 999. Any additions to the network can be accomplished by either connecting two existing nodes by a new link or by adding a new node or nodes to the network and connecting those together with new links.

The network data work sheets should be used to add new links to the data file. The VACA07.DAT file should be called up on the computer and the new link edited using a word processing program. The procedure for deletions or changes (link speed/capacity, etc.) to the network are done in the same way as additions.

The classification of each of the existing and future roadways in the study is shown on Figure 4. The capacity used for each classification is shown on Table VI. The capacities were taken from the 1985 Highway Capacity Manual and modified for conditions in Vacaville. Factors such as on-street parking, driveways, speeds, and intersection spacing were included.

For each new node added to the network, it is necessary to determine the nodes' X-Y coordinates and add those to the X-Y coordinate file. A plot of the existing roadway network with the X-Y grid on it has been provided to the City. The X-Y coordinates are only needed to plot the network and do not affect the assignment of traffic.

Land Use

The land use file includes data on the type of use, the quantity of use, and if the land use is an attraction or production use. To limit intra-zonal trips (trips staying in the zone) and obtain better modeling results, most traffic zones are formed with only one type of land use.

Land use data is broken down into several categories in a many-tiered system. Figure B-1 shows this system and the interrelation of source of the uses.

The Vacaville traffic model is broken down into 8 types of production uses and 13 attraction uses. See Table B-I for a list of the land uses in each category. Land use information is entered or changed in the "MINUTP" land use file (LODI08.DAT) by determining if the use is an attraction or production use, what land use category it fits into, which traffic zone it is in, and the appropriate land use quantity. At the end of this appendix is a land use data entry form which helps in entering or changing land use data.

After filling out the land use data sheet with the additions or changes to the traffic zones, these revisions can be made to the computer data file.

The process of changing the land use files is mostly straight forward. The only exception is in the non-home base category in the production uses. A detailed description of the non-home based category and how it is determined is included in a following section.

Because the values in the land use files must be integers, the attraction land use quantity was multiplied by 10 to get land use quantity accuracy to the nearest one-tenth of an acre. With this increase in land use quantities, it was necessary to divide the attraction trip generation rates by 10 to get the correct trip generation values. The trip generation rates located in the job stream file (VACA00.DAT) can be a decimal number.

TABLE B-I
LAND USES IN PRODUCTION/ATTRACTION CATEGORIES

<u>CODE</u>	<u>LAND USE DESCRIPTION</u>	<u>TRIP UNITS (PER)</u>
PRODUCTION USES:		
101	Single-Family Residential Low Income	DU
102	Single-Family Residential Medium Income	DU
103	Single-Family Residential High Income	DU
104	Medium-Density Residential	DU
105	High-Density Residential	DU
106	Mobile Home	DU
107	Retirement Residential	DU
108	Non-Home Based*	NO UNITS
ATTRACTION USES:		
201	Office	ACRE
202	Light Industrial	ACRE
203	General Industrial	ACRE
204	General & Neighborhood Commercial	ACRE
205	Downtown Commercial	ACRE
206	Highway Commercial	ACRE
207	Service Commercial	ACRE
208	Public Office & Civic Center	ACRE
209	Parks & Public Facilities	ACRE
210	Elementary/Junior High School	STUDENT
211	High School	STUDENT
212	Open Space/Agricultural	ACRE
213	Hospital/Church	ACRE

* See discussion of non-home based trips.

After setting up the land use files, it is then necessary to formulate the trip generation rates and internal/external-internal/internal splits by trip purpose to be used in the TRPGEN program of the MINUTP model. This process is fairly complicated and is not defined in the MINUTP Users Manual. After the trip generation rates for each land use have been defined (see Table II) and quantities (dwelling units, acres, etc.) have been calculated for each land use, then it is necessary to calculate the total trip generation for both production and attraction uses by trip purpose. Tables B-II and B-III show this breakdown for the traffic model.

TABLE B-II

PRODUCTION TRIP GENERATION

<u>LAND USE</u>	<u>TRIP GENERATION</u>	<u>HOME- WORK</u>	<u>HOME- OTHER</u>
All Residential	0.9 X TGR	0.50	0.50
Non-home Base	0.05 X TGR Attraction Uses		

NOTE: The percent of trip-by-trip purpose was determined from the Transportation and Traffic Engineering Handbook, Second Edition, and previous work completed by TJKM.

TGR = Trip Generation Rate.

Internal/external - internal/internal splits for attractions and productions by trip purpose are calculated from information on production and attraction uses external to the study area, the amount of attractions/productions within the study area, and the distances drivers are willing to travel to satisfy their needs for each trip purpose. The calculation process is an interactive process.

The total number of work productions are compared to the total number of work attractions and a reasonable percentage of work production trips that can be satisfied by the number of work attractions within the study area is estimated. This estimate is done while also keeping in mind that people will generally drive 30 to 50 percent further for a work trip than other trips. (Source: Transportation and Traffic Engineering Handbook.)

An example of this calculation follows: In the City of Vacaville study there were about 7,200 work productions and 4,800 work attractions in the existing model. Based on the relative proximity of large employment centers in Fairfield, the Bay Area, and Sacramento, it was estimated that about 60 percent of the Vacaville work production trips would stay within the City and 40 percent would go elsewhere.

From that, the calculation of the internal/external-internal/internal split for the attraction trips is relatively easy. The number of attraction internal/internal trips are

the same as the number of internal/internal trips for the production trips. Thus, the remaining attraction trips are the internal/external trips.

This method of internal/external - internal/internal split calculation is the same for all trip purposes. The only difference is that shopping and other purposes (social, recreational, school, personal business, etc.) generally are much shorter trips and, thus, a larger number stay within the study area. For example, in Vacaville it was estimated that 85 percent of the production shopping and other trips were assumed to be satisfied within the City.

Non-home based trips represent a special type of trip purpose. This type of trip is normally a trip from work to shopping, shopping to a restaurant, etc.

To model non-home based trips, it is necessary to include some way of generating production trips for attraction (non-home) land uses. This has been accomplished by determining the total number of non-home based trips for both attractions and productions. Tables B-II and B-III show the trip generation equations used to determine the non-home based trips in the Vacaville study area. The quantity of land use per traffic zone by land use type was determined from the following equation:

$$TG_{unit} = T_I \times NHB \times L_{tz}$$

WHERE: TG_{unit} = Trip generation quantity (no units).
 T_I = Total trip generation for a single
attraction land use type.
 NHB = Non-home based total trip generation.
 L_{tz} = Land use quantity per traffic zone.

The trip generation rate for non-home based productions was assumed to be 1.0 trip end per unit.

To account for home-to-home trips, a factor was used to assign home-based trips to the "other" attraction trip generation equation. For this study, 0.1 trip ends per dwelling unit was used. This rate was multiplied times the total number of dwelling units within the study area.

Figure B-1 shows the data that was used to calculate the internal/external - internal/internal splits. With the calculated internal/external - internal/internal splits

by trip purpose, trip generation rates and percentage of home-based trips by trip purpose it is possible to calculate the production and attraction of trip generation equations.

**TABLE B-III
ATTRACTION TRIP GENERATION
(PERCENT OF TRIPS)**

	Equation No. 1	Equation No. 2	Equation No. 3	Equation No. 4
Trip Purpose	Work	Other	Non-home Based	Productions
Residential	0	10	0	90
Office	90	0	5	5
Industrial				
Light	90	0	5	5
Heavy	90	0	5	5
Commercial				
Light	10	80	5	5
Downtown	10	80	5	5
General	10	80	5	5
Shopping Center	10	80	5	5
Public				
I	30	60	5	5
II	0	90	5	5
Open Space/ Agriculture	0	90	5	5
Public School				
Elementary/Jr. High	0	90	5	5
High	0	90	5	5
Church	0	90	5	5

Note: To get total trip generation by trip category, multiply trip generation rate by above percentages and by total land use quantity in each land use category.

Peak Hour Analysis

Peak hour traffic was used in this study to provide the best analysis tool for determining future traffic volumes on Vacaville City streets and appropriate improvements to the street system. The peak hour capacity of a roadway is much easier to quantify than the 24-hour or daily capacity. Thus, it is easier to determine deficiencies in the system.

The p.m. peak hour was chosen as the time period to be analyzed. The p.m. peak hour generally has the highest street traffic volumes on a system-wide basis. However, some streets have higher traffic volumes in other hours of the day. These impacts will be missed by the p.m. peak hour model, but the number of streets that have other peak hours are small.

The "MINUTP" model is written to default to a 24-hour or daily model. To make it a peak hour model that functions correctly, the MATBAL module's default values of 50 percent inbound trips and 50 percent outbound trips needed to be modified by trip purpose to account for the inbound/outbound splits expected during a peak hour. Table B-IV shows the splits used in this study.

TABLE B-IV

P.M. PEAK HOUR INBOUND/OUTBOUND SPLITS

<u>TRIP PURPOSE</u>	<u>INBOUND</u>	<u>OUTBOUND</u>
Work	30%	70%
Other	50%	50%
Non-home Based	41%	59%
External-Internal	80%	20%
Internal-External	20%	80%

To enhance the accuracy of the model, small zones, a detailed network, and peak hour volumes were used. However, this type of model does create a problem with the "MINUTP" model process. This occurs during the trip distribution phase of the model. The small zones (and larger numbers of zones), lower trip generation associated with a peak hour and the "MINUTP" model's inability to store non-integer values (such as a fraction of a trip) in the matrix result in truncation of some of the zonal trip generation values to zero. Because of this, the model will assign less than the correct volume to the network.

To correct this problem, the trip generation matrix for each trip purpose was multiplied by 100 prior to the trip distribution (TRPDST) module. These inflated values were also carried through the MATRIX, MATBAL and ASSIGN modules. The capacity figures were also increased by a factor of 100 to yield a true volume-to-capacity ratio. The traffic volumes assigned to the network are therefore high by a factor of 100 and, therefore, were divided by 100 prior to plotting in the NETPLT module.

External-External Travel

External-external travel is traffic that may use roadway facilities in the study area but does not have a destination or origination in the study area. Existing external-external traffic was determined from Caltrans and the City of Vacaville traffic counts and reduced by traffic from the study area. Future external-external traffic volumes were determined by using a growth rate for freeway, state highway, and City roadways based on historical growth trends.

External-external traffic is added to the model in the MATRIX module of the program. This is done by directly adding the external-external volumes to those volumes generated by the study through a MOD statement. A MOD statement is used for each of the cordon stations where external-external travel is expected. The volumes need to be assigned with a MOD statement for each direction of travel where applicable.

APPENDIX C

MINUTES OF PLANNING COMMISSION PUBLIC HEARING

CALL TO ORDER:

The special meeting of the Planning Commission for the Proposed General Plan was called to order by Chairman Matsuhara at 6:30 p.m.

A. ROLL CALL:

Present: Chairman Matsuhara, Vice Chairman Alpert, Commissioner McEntee, Commissioner Rajander, Commissioner Shopay, Commissioner Turner, Commissioner Weiss

Absent: None

Also Present: Director of Community Development, Gregg Werner; City Attorney, Chuck Lamoree; Director of Community Services, Ron Mikalis; Assistant Director of Community Services, Charlie Learned; Senior Planner, Maureen Traut, Assistant Planner, Bob Macaulay; Landscape Architect, Bob Farrington; Project Manager, Dave Hubbell; Housing Program Coordinator, Terry Rogers; Fire Marshal, Pete Marino; Associate Civil Engineer, John Erwin; Michael Dyett, Blayney-Dyett; Beth Walukas, TJKM

E.3. DRAFT ENVIRONMENTAL IMPACT REPORT (VOLUME THREE)

Senior Planner Traut introduced the staff report into the record, stating the study area is approximately 100 square miles. The easterly boundary is Highway 113 and the westerly boundary is the Napa/Solano County line, as shown per Figure 1 in the Draft Environmental Impact Report (DEIR). The study area includes land within the existing City limits and sphere of influence, and contains a significant area beyond the sphere of influence. (The General Plan must cover all territory within the boundaries of the City and may cover "any land outside its boundaries which in the planning agency's judgement bears relation to its planning" per Government Code Section 65300.) The current incorporated City area encompasses approximately 20 square miles. As described in the DEIR (Chapter 1 - page 1), the "Project" is the buildout of the City of Vacaville consistent with the policies of the Proposed General Plan over the next 20 years. The EIR also is intended for use by LAFCO on sphere of influence boundary adjustments and to be used by the City and SID on future agreements for provision of water to the urban area. Senior Planner Traut also stated it should be noted that the straw votes taken by the Planning Commission (including the deletion of urban growth in the West Valleys North) as of the June 14 meeting do not affect the adequacy of the DEIR. Beth Walukas with TJKM and Michael Dyett with Blayney-Dyett reviewed sections of the DEIR for the Commission.

A recess was taken at 9:05 p.m.

The meeting resumed at 9:30 p.m.

PUBLIC HEARING:

Sean Michaels, Lawrie Development, stated that the two creeks mentioned are the origin of major flooding. He stated that staff has been looking at detention basins and reservoirs to be funded by raising fees. He suggested looking at doing some dam work up there, that it might mitigate some problems.

John Forrester, Chairman of the Orderly Growth Committee, commented on the inadequacies of the EIR and read a letter to the Commission, and hoped that the suggestions mentioned would be taken into consideration.

Ted Swike stated that although the plan is intended to talk about full build-out, it does not address the areas of impact. Public hearing closed.

COMMISSION COMMENTS:

Chairman Matsuhara asked staff for the comments received from the public in the 45 day review period. Michael Dyett with Blayney-Dyett advised Chairman Matsuhara that the areas of controversy received had been addressed. Chairman Matsuhara further stated that he felt the adequacy and detail had been covered and that there would be individual Policy Plans (EIR's), and that the DEIR was adequate.

Vice Chairman Alpert voiced some concern about the process taken in the development of the EIR in that there seemed to be a lack of information in some critical areas. He felt there was a critical omission in the resource elements regarding Federally endangered species in the Vacaville area. Vice Chairman Alpert stated there was information that needed to be added and with that information included it could have a change in outlook of this document. Michael Dyett with Blayney-Dyett advised the Commission that the EIR does look at the full implications of build-out. Mr. Dyett further stated that in terms of the environmental information, there had been some changes made on the Errata Sheets.

Commissioner Turner stated that he felt the DEIR was adequate and did address the issues that had been discussed at all of the meetings.

Commissioner Rajander commented about Cal Trans expanding the freeway through Vacaville to eight lanes each way and stated that he did not see where there was enough land on I-80 to have a 16 lane freeway. Beth Walukas with TJKM advised Commissioner Rajander that she did not have the model with her, but that the available right-of-way does not allow for 16 lanes.

Commissioner McEntee asked for clarification regarding the mitigation measures that deal with the increased traffic and stated that the reliance on TSM's might be misplaced. Michael Dyett with Blayney-Dyett addressed his concerns and reviewed the TSM policy.

COMMISSION ACTION:

Chairman Matsuhara stated that since it was the consensus of the Planning Commission they would recommend to the City Council that the Environmental Impact Report for the Proposed Vacaville General Plan (EIR-2-90) be certified, finding that the document meets the requirements of CEQA and the CEQA Guidelines, provided that all written comments received prior to the close of the 45-day public review period are responded to in an adequate manner and reviewed by the City Council.

APPENDIX D

MINUTES OF CITY COUNCIL PUBLIC HEARING

**CITY OF VACAVILLE
GENERAL PLAN - SPECIAL MEETING MINUTES
July 26, 1990**

A special meeting of the City Council of the City of Vacaville was held in the Will C. Wood High School Theater, 998 Marshall Road, on July 26, 1990. The meeting was called to order by Mayor William J. Carroll at 6:40 p.m.

A. ROLL CALL

Present: Council members Fleming, Conner, and Mayor Carroll

Absent: Council member Lowe, Vice Mayor Lopez, City Attorney Charles Lamoree

Others Present: City Manager John P. Thompson; Director of Community Development Gregory Werner; Senior Planner Maureen Traut, Assistant Planner Bob Macaulay; Director of Community Services Ron Mikalis, Assistant Director of Community Services Charles Learned, Landscape Architect Bob Farrington, Housing Program Coordinator Terry Rogers, Consultant Michael Dyett, Blayney-Dyett

E3. DRAFT ENVIRONMENTAL IMPACT REPORT (Volume Three)

The staff report for the Draft Environmental Impact Report was introduced into the record by Senior Planner Traut. She stated the study area is approximately 100 square miles which includes land within the existing City limits and Sphere of Influence, and contains a significant area beyond the Sphere of Influence. She advised the current incorporated City area encompasses approximately 20 square miles. Senior Planner Traut stated the EIR is not intended to be the environmental document for specific development proposals. Individual development proposals would require separate environmental impact reports or other environmental review in accordance with the California Environmental Quality Act (CEQA). She noted that the final Council decision on the EIR will be at the August 14 meeting and that the purpose of tonight's review is for public input and preliminary Council review. She also stated that a straw vote would not be taken at this time.

Consultant Dyett reviewed Chapter 4 of the DEIR explaining environmental impacts and mitigation in the following areas: 1) traffic and transportation, 2) air quality, 3) noise, 4) visual quality/community image and form, 5) community services, 6) open space and agricultural land, 7) geologic and soils hazards, 8) hydrology: drainage and water availability, 9) biotic resources, and 10) historical and archaeological resources. He noted that the DEIR had gone through the 45-day public inspection period and acknowledged the written and verbal comments which had been received. He stated that he and staff were currently working on an Addendum to the Environmental Impact Report necessary as a result of those comments received. The Addendum should be ready for public review the week of August 6. Consultant Dyett also pointed out that as a result of previous discussions regarding implementation of the TSM, the Addendum would include a revised traffic study which examines what would happen if the TSM were not implemented.

PUBLIC HEARING:

Public hearing was opened by Mayor Carroll.

John Forester, Vacaville resident, reiterated his opinion that until a substantial water source is obtained, the City should not go beyond its current potential of 90,000 people.

There being no further comment, the public hearing was closed by Mayor Carroll.

COUNCIL COMMENTS:

Council member Fleming expressed concern regarding potential traffic. He stated traffic mitigation measures were based on numbers and that with 1,000 development units per year the result will be a population in excess of the population predicted by the General Plan. He added that if that happens, the traffic mitigation measures will be exceeded. He expressed great concern regarding existing intersections which are approaching LOS "E" and "F".

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